

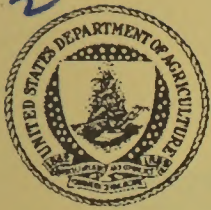
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United States  
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Foreign  
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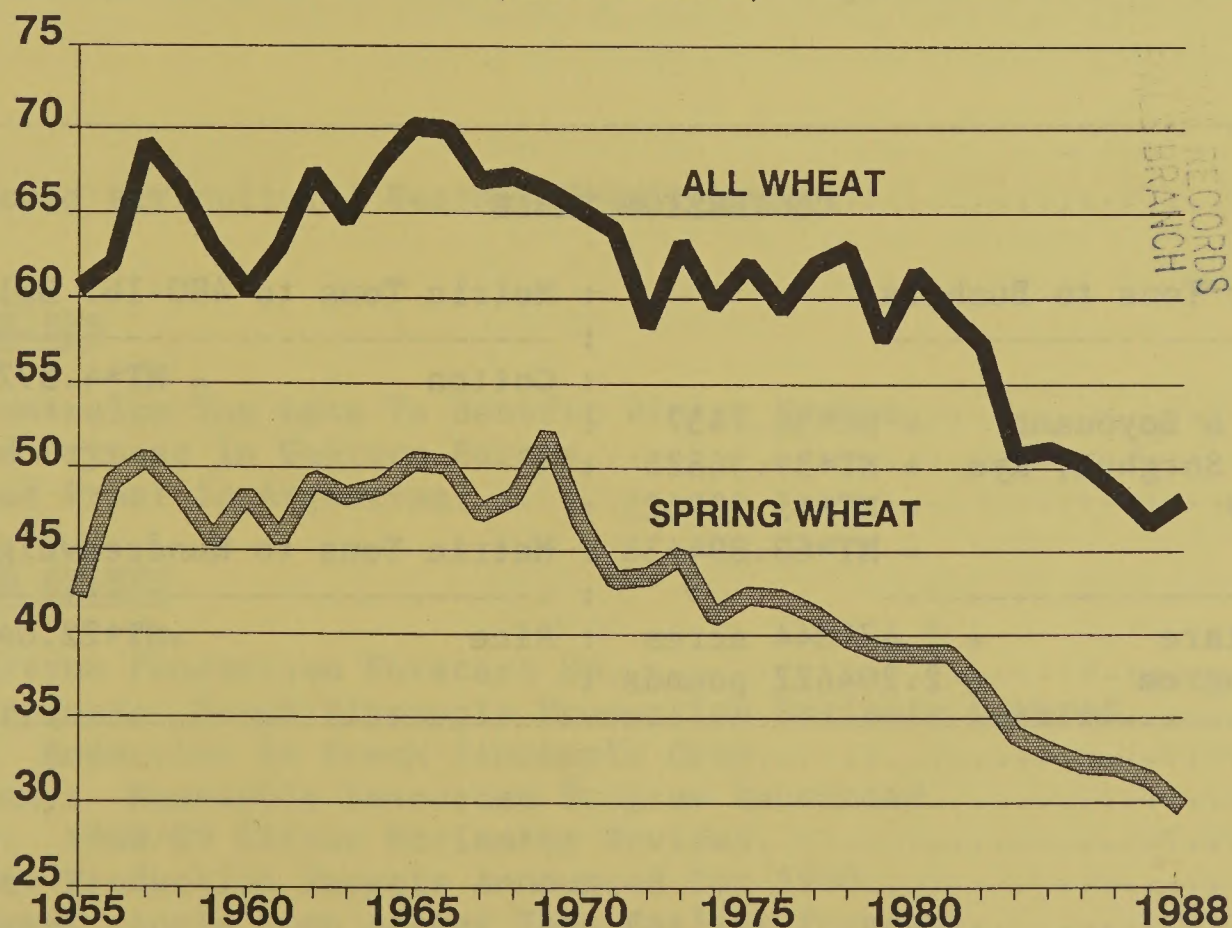
# World Agricultural Production

## Inside This Issue.....

World Pistachio Production  
World Walnut Production  
World Production of Dried Prunes  
World Production of Raisins/Sultanas  
USSR Spring Wheat Production  
African Total Grain Production  
World Sugar Production  
World Dairy Production

## USSR: WHEAT AREA

(Million Hectares)





This report draws on information from USDA's global network of agricultural attaches and counselors, official statistics of foreign governments, other foreign source materials, and results of office analysis. Estimates of U.S. acreage, yield, and production are from USDA's Agricultural Statistics Board, except where noted. All numbers in this report are based on unrounded data and detail may not add to totals because of rounding. This report reflects official USDA estimates released in World Agricultural Supply and Demand Estimates (WASDE-236), November 9, 1989.

This report was prepared by the Foreign Production Estimates Division (FPED), FAS/USDA, Washington, D.C. 20250. Further information may be obtained by writing to the division or by calling (202) 382-8888.

\*\*\*\*\*  
 \* The next issue of World Agricultural Production will be released at 3 p.m. \*  
 \* eastern time on December 13, 1989. \*  
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:			:
:	CONVERSION TABLE		:
:			:
:	Metric Tons to Bushels	:	Metric Tons to 480-lb. Bales
:	-----	:	-----
:		:	Cotton = MT*4.592917
:	Wheat & Soybeans = MT*36.7437	:	
:	Corn, Sorghum, Rye = MT*39.36825	:	
:	Barley = MT*45.929625	:	
:	Oats = MT*68.894438	:	Metric Tons to Hundredweight
:	-----	:	-----
:	1 hectare = 2.471044 acres	:	Rice = MT*22.04622
:	1 kilogram = 2.204622 pounds	:	
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## PRODUCTION HIGHLIGHTS FOR 1989/90

**WHEAT:** World production for 1989/90 is estimated at a record 532.2 million metric tons, up 2.0 million or less than 1 percent from last month and up 6 percent from last year's harvest. Important changes from last month include the following:

- o India Production is estimated at a record 53.0 million tons, up 2.0 million or 4 percent from last month and up 18 percent from last year. Record state-level yields were reported in major northern producing states, reflecting increased input usage and prolonged cool winter conditions.
- o EC-12 Production is estimated at 79.4 million tons, up 0.7 million or 1 percent from last month and up 6 percent from 1988. The increase reflects larger crops in Portugal and France due to higher estimated yields.
- o Iran Production is estimated at 6.8 million tons, up 0.5 million or 8 percent from last month and unchanged from last year. The increase is due to higher estimated yield.
- o East Europe Production is estimated at 42.3 million tons, up 0.4 million or 1 percent from last month but down 6 percent from last year. Higher yield is estimated for the record Polish crop.
- o Pakistan Production is estimated at a record 14.4 million tons, up 0.2 million or 2 percent from last month and up 14 percent from last year. Yields are forecast up owing to favorable winter weather.
- o Australia Production is estimated at 12.5 million tons, down 1.3 million or 9 percent from last month and down 11 percent from last year. Harvested area and yields are estimated down due to extended spring dryness in the major producing states.
- o South Africa Production is estimated at 2.7 million tons, down 0.4 million or 13 percent from last month and down 24 percent from last year's record harvest. The estimated yield is reduced because of very dry weather in the Orange Free State.
- o Syria Production is estimated at 1 million tons, down 0.2 million or 17 percent from last month and down 50 percent from last year. The decline is due to a lower yield estimate.



**COARSE GRAINS:** World production for 1989/90 is estimated at 807.8 million tons, up 2.7 million or less than 1 percent from last month and up 11 percent from last year. Important changes from last month include the following:

- o United States Production is estimated at 223.3 million tons, up 2.9 million or 1 percent from last month and up 49 percent from last year's crop. An increase in estimated corn output more than offset a decline in the sorghum production estimate.
- o USSR Production is estimated at 105.5 million tons, up 2.5 million or 2 percent from last month and up 8 percent from last year. Higher barley and oat output is expected while corn prospects are lower.
- o Sudan Production is forecast at 3.7 million tons, up 0.4 million or 13 percent from last month but down 24 percent from last year. The gain is due to higher millet area and increases in sorghum area and yield. Sorghum production is estimated at 3.4 million tons.
- o Morocco Production is estimated at 3.4 million tons, up 0.3 million or 10 percent from last month but down 11 percent from last year. Yield estimates for corn and barley are revised upward.
- o China Production is estimated at 93.7 million tons, down 1 million or 1 percent from last month and down 1 percent from last year. The corn production estimate is lowered to 76 million tons, down 1 million tons from last month despite an area increase of 300,000 hectares. Severe drought this summer in Shandong, Heilongjiang, and Liaoning Provinces is expected to reduce corn yields significantly.
- o Australia Production is estimated at 6.4 million tons, down 0.8 million or 11 percent from last month and down 3 percent from last year. Oat area and yields are estimated down due to unfavorably wet planting conditions and the subsequent failure of late planted oats in many areas. Barley area and yields are estimated down slightly due to extended dryness in the eastern grain belt.
- o Argentina Production is estimated at 10.3 million tons, down 0.6 million or 5 percent from last month but up 54 percent from last year. Dry weather during planting has lowered area estimates for corn and sorghum.



- o India Production is estimated at 31.4 million tons, down 0.5 million or 2 percent from last month and down 1 percent from last year. Insufficient summer rainfall in the millet heartland of northwest India is estimated to have reduced yields.
- o Nigeria Production is estimated at 8.2 million tons, down 0.5 million or 6 percent from last month and down 4 percent from last year. The decrease is due to lower corn area and yield estimates.
- o Syria Production is estimated at 0.4 million tons, down 0.3 million or 45 percent from last month, and down 85 percent from last year. Lower area and yield are estimated for barley.
- o Venezuela Production is estimated at 1.2 million tons, down 0.3 million or 20 percent from last month and down 37 percent from last year. The decline is attributed to lower sorghum area.
- o Mexico Production is estimated at 14.8 million tons, down 0.2 million or 1 percent from last month but up 7 percent from last year. The late arrival of the summer rainy season led to reductions in area and yield for both sorghum and summer barley crops.

**RICE (MILLED-BASIS):** World production for 1989/90 is estimated at a record 330.9 million tons, down 0.5 million or less than 1 percent from last month and up slightly from the 1988/89 crop. Foreign production in 1989/90 is projected at a record 325.9 million tons. U.S. output is projected at 5.0 million tons, down 5 percent from last season. Important changes from last month include the following:

- o Pakistan Production is estimated at 3.1 million tons, down 0.5 million or 13 percent from last month and down 5 percent from last year's flood-affected crop. Yields are estimated down because of October rainfall damage to mature crops in Sind Province.

**OILSEEDS:** World production for 1989/90 is forecast at 214.6 million tons, down 0.7 million tons from last month but up 12.0 million or 6 percent from last year's output. U.S. production is estimated at 59.7 million, up 0.2 million or less than 1 percent from last month and up 19 percent from last year. Foreign production is estimated at a record 154.9 million, down 0.9 million or 1 percent from last month but up 2 percent from last year.

- \* **Soybeans:** World production for 1989/90 is forecast at 107.9 million tons, down 0.4 million from last month but up 12.9 million or 14 percent from last year. Significant changes from last month include:



o United States

Production is estimated at 52.7 million tons, up 0.3 million or less than 1 percent from last month and up 10.6 million or 25 percent from last year. The increase is due to an improved yield forecast.

o China

Production is estimated at 11.3 million tons, down 0.7 million or 6 percent from last month and down 3 percent from last year. Drought conditions in Heilongjiang and Shandong Provinces in northern China are expected to reduce soybean yields to the lowest levels since 1985/86.

- \* Cottonseed: World production for 1989/90 is forecast at 31.2 million tons, up 0.4 million or 1 percent from last month but down 1.0 million or 3 percent from last year. Significant changes from last month include:

o United States

Production is estimated at 4.3 million tons, up less than 1 percent from last month and down 1.2 million or 22 percent from last year. The upward adjustment is due to slightly increased harvested area and yield estimates.

o India

Production is estimated at 3.8 million tons, up 0.2 million or 4 percent from last month and up 6 percent from last year. Higher cotton yields are expected following a favorable summer monsoon growing season.

o Pakistan

Production is estimated at 3.1 million tons, up 0.1 million or 4 percent from last month and up 7 percent from last year's flood-affected crop. Increased production is attributed to higher cotton area, along with increased yields from a mild summer growing season in Punjab Province.

o Brazil

Production is estimated at 1.4 million tons, down 0.1 million or 7 percent from last month but up 2 percent from last year. Yields are reduced because of dry weather conditions in Bahia and reported boll weevil problems in other northeastern states.

- \* Peanuts: World production for 1989/90 is forecast at 22.5 million tons, down 0.8 million or 3 percent from last month and down 0.8 million or 4 percent from last year. Significant changes from last month include:



- o United States      Production is estimated at 1.9 million tons, down 0.1 million or 5 percent from last month but up 4 percent from last year. Both area and yield are estimated down slightly from last month.
  
- o China      Production is estimated at 5.5 million tons, down 0.7 million or 11 percent from last month and down 0.2 million or 3 percent from last year. Reports from the Chinese Government indicate that oilseed production will be lower this year due to a drop in area and drought-reduced yields in northern production areas.
  
- \* Sunflowerseed: World production for 1989/90 is forecast at 21.7 million tons, up 0.2 million or 1 percent from last month and up 7 percent from last year. Significant changes from last month include:
  - o USSR      Production is estimated at 6.5 million tons, up 0.2 million or 3 percent from last month and up 0.3 million or 6 percent from last year. Early harvest reports indicate yield prospects are improved over last season.
  
- \* Rapeseed: World production for 1989/90 is estimated at 21.5 million tons, down slightly from last month and down 1.0 million or 5 percent from last year.
  
- \* Flaxseed: World production for 1989/90 is estimated at 2.0 million tons, unchanged from last month but up 0.3 million or 19 percent from last year.
  
- \* Copra: World production for 1989/90 is estimated at 4.7 million tons, unchanged from last month but up 0.2 million or 4 percent from last year.
  
- \* Palm Kernels: World production for 1989/90 is forecast at 3.1 million tons, unchanged from last month but up 0.2 million or 7 percent from last year.
  
- \* Palm Oil: World production for 1989/90 is forecast at 10.0 million tons, up slightly from last month and up 0.7 million or 7 percent from last year.

COTTON: World cotton production for 1989/90 is estimated at 80.6 million bales, up 0.7 million or less than 1 percent from last month but down 3.5 million or 4 percent from last year. Foreign production is estimated at 68.5 million bales, up 0.6 million from last month but slightly below the 1988/89 estimate. Important changes from a month ago include the following:

- o United States      Production is estimated at 12.1 million bales, up 0.1 million or 1 percent from last month but down 21 percent from last year. Both area and yield prospects have increased slightly since last month.



- o    India                      Production is estimated at 8.7 million bales, up 0.2 million or 2 percent from last month and up 5 percent from last year. Well-distributed rainfall in the winter cropping region in the south has improved yield prospects there. A typhoon that came ashore in the southeastern state of Andhra Pradesh on November 8 has probably damaged some cotton in the blossom stage, but should have provided beneficial moisture to cotton outside the damaged area.
- o    Pakistan                  Production is estimated at a record 7.1 million bales, up 0.2 million or 3 percent from last month, and up 8 percent from last year's record (though flood-affected) crop. The increased forecast is attributed to higher harvested area and a mild summer growing season in the Punjab, which promoted increased boll formation.
- o    Brazil                      Production is estimated at 3.6 million bales, down 0.1 million or 3 percent from last month but up 8 percent from last year. Downward revisions are based on reported harvest results from the northeastern growing areas.
- o    Egypt                      Production is estimated at 1.5 million bales, down 0.1 million or 6 percent from last month but up 7 percent from last year. Lower harvested area and lower-than-expected yields account for the reduction.
- o    USSR                      Production is estimated at 11.5 million bales, up 0.5 million or 5 percent from last month, but down 9 percent from last year. Harvest progress reports from major growing areas indicate higher-than-expected yields.



TABLE 1

*U.S. Crop Acreage, Yield, and Production 1/*

Commodity	--Planted Area--			--Harvested Area--			--Yield--			--Production--		
	1987/88	1988/89	Proj. 1989/90	1987/88	1988/89	Proj. 1989/90	1987/88	1988/89	Prel. 1989/90 Proj. Oct. Nov.	1987/88	1988/89	Prel. 1989/90 Proj. Oct. Nov.
	--Million Acres--			--Million Acres--			--Bushels per Acre--			--Million Bushels--		
All Wheat	65.8	65.5	76.6	56.0	53.2	62.1	37.7	34.1	32.9	2107	1811	2042
Winter	48.8	48.8	55.0	39.3	39.8	41.4	39.8	39.2	35.1	1565	1561	1452
Other	17.0	16.7	21.5	16.6	13.4	20.7	32.6	18.7	28.5	542	250	590
Rye	2.5	2.4	2.0	0.7	0.6	0.5	29.0	24.8	28.2	20	15	14
Soybeans	58.0	59.0	60.5	57.0	57.5	59.1	33.7	26.9	32.6	1923	1548	1937
Corn	65.7	67.6	72.3	59.2	58.2	65.1	119.4	84.6	114.4	7072	4921	7449
Sorghum	11.8	10.4	11.9	10.6	9.1	10.5	69.7	63.8	62.4	739	578	657
Barley	11.0	9.9	9.2	10.1	7.7	8.3	52.7	38.2	48.6	530	294	405
Oats	18.0	13.9	12.1	6.9	5.6	6.8	54.0	39.2	54.3	374	219	371
							--Pounds per Acre--			---Million CWT.---		
Rice	2.4	2.9	2.8	2.3	2.9	2.7	5,555	5,511	5,649	129.6	159.5	155.1
										---Million 480-Pound---		
All Cotton	10.4	12.5	10.5	10.0	11.9	9.6	706	619	603	14.8	15.4	12.0

1/ Estimates from USDA Agricultural Statistics Board.

NOVEMBER 1989

FOREIGN PRODUCTION ESTIMATES DIVISION, FAS, USDA



TABLE 2

## World Crop Production Summary

Commodity	World	Total Foreign	North America			Europe		USSR	Asia				South America	Selected Other			All Other Countries				
			United States		Mexico	EC-12	Oth. W. Europe		Eastern Europe	China	India	Indonesia		Paki- stan	Thai- land	Argen- tina		Brazil	Aus- tralia	South Africa	Turkey
---Million Metric Tons---																					
Wheat 1987/88 1988/89 prel. 1989/90 proj. October November	501.7	444.4	57.4	26.0	3.7	71.4	4.0	39.8	83.3	85.8	44.3	0.0	12.0	0.0	8.8	6.1	12.4	3.1	13.0	16.1	
	500.8	451.5	49.3	16.0	3.2	74.8	3.9	45.1	84.4	86.4	45.1	0.0	12.7	0.0	8.1	5.8	14.1	3.5	15.0	17.4	
	530.2	474.6	55.6	24.0	3.9	78.7	4.3	42.0	89.0	91.0	51.0	0.0	14.2	0.0	11.0	4.8	13.8	3.1	12.0	16.1	
	532.2	476.6	55.6	24.0	3.9	79.4	4.3	42.3	89.0	91.0	53.0	0.0	14.4	0.0	11.0	4.8	12.5	2.7	12.0	15.9	
Coarse Grains 1987/88 1988/89 prel. 1989/90 proj. October November	791.7	575.8	215.9	25.5	14.5	82.4	10.8	63.9	113.7	95.8	23.5	4.8	2.2	2.9	13.1	25.4	7.2	7.9	9.3	72.9	
	729.1	579.5	149.6	19.7	13.8	88.9	11.3	60.8	97.5	94.3	31.6	5.2	2.3	4.5	6.7	26.7	6.7	12.4	10.0	87.4	
	805.2	584.8	220.4	23.2	15.0	80.7	12.3	69.1	103.0	94.7	31.9	5.2	2.6	4.1	10.9	26.3	7.2	8.8	9.1	80.8	
	807.8	584.5	223.3	23.2	14.8	81.0	12.3	69.1	105.5	93.7	31.4	5.2	2.6	4.1	10.3	26.3	6.4	8.8	9.1	80.8	
Rice (Milled) 1987/88 1988/89 1989/90 October November	312.9	308.8	4.1	0.0	0.4	1.3	0.0	0.2	1.7	121.7	56.4	27.0	3.2	11.9	0.2	8.0	0.5	0.0	0.2	21.9	
	328.7	323.5	5.2	0.0	0.3	1.3	0.0	0.2	1.9	118.4	70.0	27.5	3.2	13.9	0.2	7.5	0.6	0.0	0.2	22.3	
	331.4	326.4	4.9	0.0	0.4	1.3	0.0	0.2	1.8	122.5	66.0	28.0	3.5	14.2	0.3	6.9	0.6	0.0	0.2	22.8	
	330.9	325.9	5.0	0.0	0.4	1.3	0.0	0.2	1.8	122.5	66.0	28.0	3.1	14.2	0.3	6.9	0.6	0.0	0.2	22.8	
Total Grains 1/ 1987/88 1988/89 prel. 1989/90 proj. October November	1,606.3	1,328.9	277.3	51.5	18.6	155.1	14.8	104.0	198.7	303.4	124.2	31.8	17.5	14.9	22.1	39.5	20.1	11.0	22.4	179.3	
	1,558.7	1,354.5	204.1	35.7	17.2	165.0	15.2	106.2	183.8	299.0	146.7	32.7	18.2	18.3	15.0	40.0	21.3	15.9	25.2	199.4	
	1,666.7	1,385.8	280.9	47.2	19.3	160.7	16.6	111.3	193.8	308.2	148.9	33.2	20.3	18.3	22.2	38.0	21.7	11.9	21.2	193.0	
	1,670.9	1,387.0	283.8	47.2	19.1	161.6	16.6	111.6	196.3	307.2	150.4	33.2	20.1	18.3	21.6	38.0	19.6	11.5	21.2	193.6	
Oilseeds 2/ 1987/88 1988/89 prel. 1989/90 proj. October November	208.0	147.5	60.6	5.9	1.2	12.2	0.5	5.3	11.8	33.7	13.7	1.7	3.2	0.6	14.0	19.7	0.9	1.0	2.0	20.2	
	202.6	152.3	50.3	5.9	0.9	11.3	0.6	5.1	12.7	30.8	19.3	1.9	3.3	0.7	10.5	24.4	1.7	0.9	2.3	20.1	
	215.3	155.8	59.5	5.0	1.3	10.5	0.7	5.8	12.3	32.4	17.8	2.1	3.4	0.8	15.7	22.2	0.9	0.9	2.4	21.8	
	214.6	154.9	59.7	5.0	1.3	10.5	0.7	5.8	12.7	31.0	17.9	2.1	3.5	0.8	15.7	22.1	0.9	0.9	2.4	21.7	
---Million 480-Pound Bales---																					
Cotton 1987/88 1988/89 prel. 1989/90 proj. October November	81.0	66.2	14.8	0.0	1.0	1.2	0.0	0.1	11.3	19.5	7.4	0.0	6.8	0.1	1.3	3.5	1.3	0.4	2.5	10.0	
	84.1	68.7	15.4	0.0	1.4	1.6	0.0	0.1	12.7	19.1	8.3	0.0	6.6	0.2	0.8	3.3	1.3	0.3	3.0	10.0	
	79.9	67.9	12.0	0.0	0.8	1.4	0.0	0.1	11.0	19.5	8.5	0.0	6.9	0.1	0.9	3.7	1.5	0.4	2.8	10.4	
	80.6	68.5	12.1	0.0	0.8	1.4	0.0	0.1	11.5	19.5	8.7	0.0	7.1	0.1	0.9	3.6	1.5	0.4	2.8	10.2	

1/ Includes total of wheat, coarse grains, and rice (milled) shown above. Estimates of Soviet total grain production, including wheat, coarse grains, rice (rough), minor grains and pulses are 211.4 million tons in 1987/88, 195.1 million in 1988/89, and 208.0 million forecast in 1989/90.

2/ Totals for major regions and countries include the six major oilseeds shown elsewhere in this report, while world and total foreign also include copra and palm kernels for all countries.

Note: Entries of 0.0 indicate no reported or insignificant production.

NOVEMBER 1989

FOREIGN PRODUCTION ESTIMATES DIVISION, FAS, USDA



TABLE 3

## Wheat Area, Yield, and Production: World and Selected Countries and Regions

Country/Region	---Area---			---Yield---				---Production---			
	Prel.	Proj.		Prel.	1989/90	Proj.		Prel.	1989/90	Proj.	
	1987/88	1988/89	1989/90	1987/88	1988/89	Oct.	Nov.	1987/88	1988/89	Oct.	Nov.
	---Million Hectares---			---Metric Tons Per Hectare---				---Million Metric Tons---			
World	219.9	218.4	225.7	2.28	2.29	2.34	2.36	501.7	500.8	530.2	532.2
United States	22.6	21.5	25.1	2.53	2.29	2.21	2.21	57.4	49.3	55.6	55.6
Total Foreign	197.2	196.9	200.6	2.25	2.29	2.36	2.38	444.4	451.5	474.6	476.6
Maj. Foreign Exporters	43.2	42.1	44.5	2.74	2.68	2.84	2.85	118.6	112.9	127.5	126.9
Argentina	4.8	4.7	5.7	1.84	1.72	1.93	1.93	8.8	8.1	11.0	11.0
Australia	9.1	8.9	8.9	1.36	1.58	1.49	1.40	12.4	14.1	13.8	12.5
Canada	13.5	13.0	13.6	1.93	1.23	1.76	1.76	26.0	16.0	24.0	24.0
EC-12	15.9	15.5	16.3	4.50	4.82	4.81	4.88	71.4	74.8	78.7	79.4
Major Importers	95.4	96.6	96.8	2.34	2.39	2.44	2.45	223.6	231.0	236.1	236.7
Brazil	3.5	3.5	3.1	1.76	1.68	1.55	1.55	6.1	5.8	4.8	4.8
China	28.8	28.8	29.8	2.98	3.00	3.05	3.05	85.8	86.4	91.0	91.0
Eastern Europe	10.5	10.6	10.6	3.78	4.24	3.97	4.00	39.8	45.1	42.0	42.3
Egypt	0.6	0.6	0.6	4.23	4.76	4.76	4.76	2.4	2.8	3.0	3.0
Other N. Africa */	5.1	4.7	4.9	1.01	1.14	1.11	1.13	5.2	5.4	5.4	5.6
Japan	0.3	0.3	0.3	3.19	3.62	3.30	3.61	0.9	1.0	0.9	1.0
USSR	46.7	48.1	47.5	1.78	1.76	1.87	1.87	83.3	84.4	89.0	89.0
Other Foreign	58.6	58.3	59.2	1.75	1.85	1.87	1.91	102.2	107.6	110.9	113.0
India	23.1	22.6	23.6	1.92	2.00	2.16	2.25	44.3	45.1	51.0	53.0
Iran	6.1	6.3	6.3	0.98	1.08	1.00	1.08	6.0	6.8	6.3	6.8
Mexico	0.9	0.8	1.0	4.11	4.00	4.11	4.11	3.7	3.2	3.9	3.9
Non-EC W. Europe	0.9	0.8	0.9	4.24	5.01	5.05	5.03	4.0	3.9	4.3	4.3
Pakistan	7.7	7.3	7.5	1.56	1.73	1.89	1.92	12.0	12.7	14.2	14.4
South Africa	1.7	2.0	1.8	1.81	1.78	1.69	1.48	3.1	3.5	3.1	2.7
Turkey	8.7	8.8	8.7	1.49	1.71	1.38	1.38	13.0	15.0	12.0	12.0
Others	9.4	9.7	9.5	1.72	1.79	1.69	1.67	16.1	17.4	16.1	15.9

\*/ Algeria, Libya, Morocco, and Tunisia.

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TABLE 4  
Coarse Grains Area, Yield, and Production: World and Selected Countries and Regions

Country/Region	---Area---			---Yield---				---Production---			
	Prel.		Proj.	Prel.		1989/90	Proj.	Prel.		1989/90	Proj.
	1987/88	1988/89	1989/90	1987/88	1988/89	Oct.	Nov.	1987/88	1988/89	Oct.	Nov.
TOTAL COARSE GRAINS 1/	---Million Hectares---			---Metric Tons Per Hectare---				---Million Metric Tons---			
World	323.0	327.2	326.8	2.45	2.23	2.46	2.47	791.7	729.1	805.2	807.8
United States	35.4	32.8	36.9	6.10	4.56	5.97	6.05	215.9	149.6	220.4	223.3
Total Foreign	287.6	294.4	289.9	2.00	1.97	2.01	2.02	575.8	579.5	584.8	584.5
Maj. Foreign Exporters	23.5	20.9	22.2	2.41	2.38	2.38	2.38	56.6	49.9	54.2	52.8
Argentina	4.4	3.0	3.6	2.99	2.22	2.95	2.90	13.1	6.7	10.9	10.3
Australia	4.6	4.4	4.2	1.55	1.52	1.56	1.52	7.2	6.7	7.2	6.4
Canada	8.0	7.1	8.2	3.21	2.76	2.83	2.83	25.5	19.7	23.2	23.2
South Africa	4.6	4.6	4.6	1.73	2.68	1.89	1.89	7.9	12.4	8.8	8.8
Thailand	2.0	1.8	1.6	1.50	2.50	2.57	2.57	2.9	4.5	4.1	4.1
Major Importers	107.7	106.6	103.7	2.66	2.57	2.71	2.74	286.8	273.7	281.6	284.2
Eastern Europe	17.8	18.2	18.2	3.58	3.33	3.79	3.79	63.9	60.8	69.1	69.1
EC-12	19.0	19.3	18.6	4.33	4.61	4.31	4.35	82.4	88.9	80.7	81.0
Other W. Europe	3.1	3.2	3.1	3.50	3.52	3.97	3.97	10.8	11.3	12.3	12.3
Mexico	7.8	7.6	7.8	1.87	1.81	1.90	1.89	14.5	13.8	15.0	14.8
USSR	59.5	57.8	55.5	1.91	1.69	1.86	1.90	113.7	97.5	103.0	105.5
Other Major Import. 2/	0.5	0.5	0.5	3.14	3.40	3.11	3.08	1.4	1.5	1.5	1.5
Other Foreign	156.5	166.8	164.0	1.49	1.53	1.52	1.51	232.4	255.9	249.0	247.6
Brazil	13.6	14.0	14.0	1.87	1.91	1.88	1.88	25.4	26.7	26.3	26.3
China	28.7	27.8	28.7	3.33	3.39	3.33	3.26	95.8	94.3	94.7	93.7
India	36.3	39.5	39.5	0.65	0.80	0.81	0.79	23.5	31.6	31.9	31.4
Indonesia	2.7	2.9	2.9	1.79	1.82	1.82	1.82	4.8	5.2	5.2	5.2
Nigeria	9.4	10.1	9.9	0.72	0.84	0.85	0.83	6.8	8.5	8.7	8.2
Philippines	3.7	3.8	3.6	1.18	1.21	1.25	1.25	4.4	4.5	4.5	4.5
Turkey	4.3	4.4	4.4	2.17	2.29	2.08	2.08	9.3	10.0	9.1	9.1
Others	57.8	64.4	61.1	1.08	1.17	1.12	1.13	62.5	75.1	68.7	69.2
BARLEY											
World	79.6	77.9	75.1	2.27	2.14	2.21	2.25	180.6	166.9	166.6	168.9
United States	4.1	3.1	3.4	2.83	2.06	2.61	2.61	11.5	6.4	8.8	8.8
Total Foreign	75.6	74.8	71.7	2.24	2.15	2.19	2.23	169.1	160.6	157.8	160.1
Australia	2.4	2.2	2.3	1.46	1.47	1.52	1.48	3.5	3.3	3.6	3.4
Canada	5.0	4.2	4.7	2.79	2.46	2.57	2.57	14.0	10.2	12.1	12.1
China	3.4	3.3	3.4	1.78	1.92	2.05	2.05	6.0	6.3	6.9	6.9
Eastern Europe	4.3	4.3	4.4	3.79	3.73	3.76	3.80	16.3	16.2	16.4	16.6
EC-12	12.2	12.2	11.8	3.83	4.13	3.89	3.91	46.8	50.6	46.0	46.2
Other W. Europe	1.6	1.7	1.5	3.13	3.27	3.71	3.74	5.2	5.6	5.6	5.7
Turkey	3.2	3.3	3.3	1.88	2.12	1.82	1.82	6.0	7.0	6.0	6.0
USSR	30.7	29.7	28.0	1.91	1.50	1.68	1.75	58.4	44.5	47.0	49.0
Others	12.8	13.7	12.4	1.02	1.22	1.12	1.15	13.0	16.8	14.3	14.3

FOOTNOTES AT END OF TABLE

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FOREIGN PRODUCTION ESTIMATES DIVISION, FAS, USDA



TABLE 4 (Continued)  
Coarse Grains Area, Yield, and Production: World and Selected Countries and Regions

Country/Region	---Area---			---Yield---				---Production---			
	Prel. Proj.			Prel. 1989/90 Proj.				Prel. 1989/90 Proj.			
	1987/88	1988/89	1989/90	1987/88	1988/89	Oct.	Nov.	1987/88	1988/89	Oct.	Nov.
CORN	---Million Hectares---			---Metric Tons Per Hectare---				---Million Metric Tons---			
World	125.0	125.1	128.6	3.58	3.19	3.63	3.64	447.4	399.1	466.5	467.7
United States	24.0	23.5	26.3	7.50	5.31	7.18	7.32	179.6	125.0	189.2	192.8
Total Foreign	101.1	101.6	102.2	2.65	2.70	2.71	2.69	267.7	274.1	277.3	274.9
Maj. Foreign Exporters	8.0	7.1	7.3	2.35	2.91	2.63	2.60	18.8	20.6	19.3	19.0
Argentina	2.6	1.7	2.2	3.46	2.76	3.41	3.35	9.0	4.7	7.5	7.2
South Africa	3.7	3.8	3.8	1.93	3.10	2.13	2.13	7.1	11.7	8.0	8.0
Thailand	1.8	1.6	1.4	1.56	2.63	2.71	2.71	2.7	4.2	3.8	3.8
Major Importers	21.9	22.2	22.1	3.79	3.81	4.02	4.00	83.2	84.4	89.1	88.4
Eastern Europe	7.3	7.3	7.3	4.14	3.72	4.72	4.66	30.3	27.3	34.6	34.1
EC-12	3.7	4.0	3.8	6.99	7.07	6.44	6.70	25.9	28.6	25.4	25.6
Other W. Europe	0.2	0.2	0.2	8.00	8.55	8.77	8.77	1.8	1.9	1.9	1.9
Mexico	6.0	6.0	6.1	1.65	1.68	1.69	1.69	9.9	10.1	10.3	10.3
USSR	4.6	4.4	4.5	3.24	3.62	3.67	3.56	14.8	16.0	16.5	16.0
Other Maj. Import. 2/	0.1	0.1	0.1	4.17	4.19	4.18	4.18	0.5	0.4	0.5	0.5
Other Foreign	71.1	72.3	72.8	2.33	2.34	2.32	2.30	165.7	169.1	168.9	167.5
Brazil	13.2	13.5	13.5	1.88	1.93	1.89	1.89	24.7	26.0	25.5	25.5
Canada	1.0	1.0	1.0	7.02	5.47	5.71	5.71	7.0	5.4	5.8	5.8
China	20.2	19.6	20.3	3.92	3.95	3.85	3.74	79.2	77.4	77.0	76.0
Egypt	0.8	0.8	0.8	4.97	5.21	5.33	5.33	4.1	4.3	4.4	4.4
India	5.5	5.9	6.0	1.00	1.36	1.33	1.33	5.5	8.0	8.0	8.0
Indonesia	2.7	2.9	2.9	1.79	1.82	1.82	1.82	4.8	5.2	5.2	5.2
Philippines	3.7	3.8	3.6	1.18	1.21	1.25	1.25	4.4	4.5	4.5	4.5
Zimbabwe	1.2	1.2	1.2	1.80	1.56	1.63	1.63	2.2	1.9	2.0	2.0
Others	22.8	23.7	23.6	1.49	1.54	1.54	1.54	33.8	36.4	36.6	36.2
SORGHUM											
World	41.9	44.2	44.4	1.34	1.24	1.32	1.30	56.2	54.8	58.8	57.8
United States	4.3	3.7	4.3	4.38	4.00	3.92	3.75	18.8	14.7	16.7	16.0
Total Foreign	37.6	40.5	40.1	1.00	0.99	1.04	1.04	37.4	40.1	42.1	41.8
Argentina	1.0	0.7	0.7	3.00	1.79	3.00	3.00	3.0	1.3	2.4	2.1
Australia	0.8	0.7	0.7	2.19	1.63	2.15	2.15	1.7	1.1	1.4	1.4
China	1.9	1.9	1.9	2.91	2.92	2.93	2.93	5.4	5.4	5.5	5.5
India	15.6	16.0	16.2	0.61	0.66	0.71	0.71	9.5	10.5	11.5	11.5
Mexico	1.4	1.3	1.3	2.91	2.49	2.98	2.94	4.0	3.1	4.1	3.9
Nigeria	4.3	4.4	4.4	0.67	0.80	0.80	0.80	2.9	3.5	3.5	3.5
South Africa	0.3	0.3	0.3	1.52	1.58	1.65	1.65	0.5	0.4	0.5	0.5
Sudan	3.0	5.3	4.9	0.43	0.83	0.63	0.69	1.3	4.4	3.0	3.4
Thailand	0.2	0.2	0.2	1.03	1.39	1.49	1.49	0.2	0.3	0.3	0.3
Others	9.1	9.8	9.6	0.98	1.03	1.01	1.01	8.9	10.1	9.9	9.7

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FOREIGN PRODUCTION ESTIMATES DIVISION, FAS, USDA



TABLE 4 (Continued)  
Coarse Grains Area, Yield, and Production: World and Selected Countries and Regions

Country/Region	---Area---				---Yield---					---Production---			
	1987/88	Prel.	Proj.		1987/88	Prel.	1989/90	Proj.		1987/88	Prel.	1989/90	Proj.
		1988/89	1989/90			1988/89	Oct.	Nov.			1988/89	Oct.	Nov.
OATS	---Million Hectares---				---Metric Tons Per Hectare---					---Million Metric Tons---			
World	23.6	22.2	22.0		1.84	1.69	1.83	1.87		43.3	37.7	40.9	41.1
United States	2.8	2.3	2.8		1.94	1.40	1.95	1.95		5.4	3.2	5.4	5.4
Total Foreign	20.8	20.0	19.3		1.82	1.73	1.81	1.85		37.9	34.5	35.5	35.7
USSR	11.8	10.9	10.0		1.57	1.40	1.50	1.60		18.5	15.3	15.0	16.0
Maj. Foreign Exporters	3.5	3.5	3.7		1.96	1.91	1.91	1.92		6.8	6.7	7.8	7.2
Argentina	0.5	0.4	0.5		1.30	1.10	1.39	1.39		0.7	0.4	0.6	0.6
Australia	1.3	1.3	1.2		1.32	1.49	1.33	1.21		1.7	2.0	2.0	1.4
Canada	1.3	1.4	1.7		2.37	2.18	2.15	2.15		3.0	3.0	3.7	3.7
Sweden	0.4	0.4	0.4		3.63	3.14	3.64	3.56		1.4	1.3	1.5	1.5
Other Foreign	5.5	5.5	5.6		2.27	2.26	2.29	2.27		12.5	12.5	12.7	12.6
China	0.6	0.6	0.6		1.10	1.19	1.20	1.20		0.6	0.7	0.7	0.7
Eastern Europe	1.4	1.4	1.4		2.79	2.62	2.74	2.74		4.0	3.7	3.9	3.9
East Germany	0.1	0.2	0.2		4.28	3.30	3.94	3.94		0.6	0.5	0.7	0.7
Poland	0.9	0.9	0.9		2.84	2.62	2.70	2.70		2.4	2.2	2.3	2.3
EC-12	1.8	1.8	1.7		3.02	3.12	2.85	2.77		5.3	5.5	4.9	4.7
France	0.3	0.3	0.3		3.91	3.86	3.90	3.90		1.0	1.0	1.0	1.0
West Germany	0.6	0.6	0.5		4.30	4.23	3.75	3.75		2.4	2.4	2.0	2.0
Finland	0.4	0.4	0.4		2.21	2.21	3.14	3.14		0.8	0.9	1.4	1.4
Norway	0.1	0.1	0.1		3.87	2.98	3.68	3.68		0.5	0.4	0.5	0.5
Others	1.3	1.3	1.3		1.06	1.08	1.08	1.08		1.3	1.4	1.4	1.4
RYE													
World	15.6	15.9	16.3		2.12	2.07	2.28	2.30		33.0	33.0	37.2	37.5
United States	0.3	0.2	0.2		1.82	1.55	1.77	1.77		0.5	0.4	0.3	0.3
Total Foreign	15.3	15.7	16.1		2.13	2.08	2.29	2.31		32.5	32.6	36.9	37.1
USSR	9.7	10.1	10.3		1.86	1.83	2.04	2.04		18.1	18.5	21.0	21.0
Maj. Foreign Exporter													
Canada	0.3	0.3	0.4		1.58	1.04	1.76	1.76		0.5	0.3	0.6	0.6
Other Foreign													
Eastern Europe	3.7	3.9	3.9		2.72	2.58	2.74	2.82		10.0	10.0	10.7	11.0
East Germany	0.7	0.6	0.6		3.49	2.93	3.13	3.13		2.3	1.8	2.0	2.0
Poland	2.6	2.9	2.9		2.57	2.51	2.70	2.80		6.8	7.2	7.8	8.1
Czechoslovakia	0.1	0.2	0.2		3.49	3.42	3.42	3.42		0.5	0.5	0.5	0.5
EC-12	1.0	0.9	1.0		2.93	3.05	3.30	3.30		3.0	2.9	3.2	3.2
Denmark	0.1	0.1	0.1		3.77	4.58	5.04	5.04		0.5	0.4	0.5	0.5
West Germany	0.4	0.4	0.4		3.89	4.19	4.68	4.68		1.6	1.6	1.9	1.9
Others	0.6	0.5	0.6		1.77	2.02	2.28	2.26		1.0	1.0	1.3	1.3

1/ Total of barley, corn, sorghum, oats, and rye shown below plus millet and mixed grain.

2/ Japan, Republic of Korea, and Taiwan.

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FOREIGN PRODUCTION ESTIMATES DIVISION, FAS, USDA



TABLE 5

## Rice Area, Yield, and Production: World and Selected Countries and Regions

[illegible]

\* / Hong Kong, Iran, Iraq, Ivory Coast, and Saudi Arabia.



TABLE 6  
Oilseeds Area, Yield, and Production: World and Selected Countries and Regions

Country/Region	---Area---			---Yield---				---Production---			
	Prel.		Proj.	Prel.		1989/90	Proj.	Prel.		1989/90	Proj.
	1987/88	1988/89	1989/90	1987/88	1988/89	Oct.	Nov.	1987/88	1988/89	Oct.	Nov.
	---Million Hectares---			---Metric Tons Per Hectare---				---Million Metric Tons---			
SOYBEANS											
World	54.14	55.58	57.76	1.91	1.71	1.88	1.87	103.33	95.00	108.32	107.91
United States	23.06	23.26	23.91	2.27	1.81	2.19	2.20	52.33	42.12	52.43	52.70
Total Foreign	31.08	32.32	33.86	1.64	1.64	1.65	1.63	51.00	52.89	55.89	55.20
Maj. Foreign Exporters	14.78	16.20	16.50	1.88	1.83	1.88	1.88	27.72	29.60	31.00	31.00
Argentina	4.26	4.00	5.00	2.28	1.65	2.10	2.10	9.70	6.60	10.50	10.50
Brazil	10.52	12.20	11.50	1.71	1.89	1.78	1.78	18.02	23.00	20.50	20.50
Other Foreign	16.30	16.12	17.36	1.43	1.44	1.43	1.39	23.28	23.29	24.89	24.20
Canada	0.46	0.53	0.54	2.75	2.16	2.15	2.15	1.27	1.15	1.16	1.16
China	8.41	8.02	8.30	1.48	1.45	1.45	1.36	12.43	11.65	12.00	11.30
Eastern Europe	0.53	0.56	0.54	1.31	1.20	1.44	1.44	0.69	0.67	0.78	0.78
EC-12	0.56	0.52	0.60	3.16	3.17	3.07	3.06	1.78	1.64	1.83	1.84
India	1.68	1.80	2.00	0.58	0.83	0.80	0.80	0.98	1.50	1.60	1.60
Indonesia	0.95	1.05	1.20	1.00	1.05	1.04	1.04	0.95	1.10	1.25	1.25
Paraguay	0.62	0.70	0.76	1.79	2.01	1.84	1.84	1.10	1.40	1.40	1.40
USSR	0.78	0.76	0.78	0.91	1.16	1.03	1.03	0.71	0.88	0.80	0.80
Others	2.31	2.18	2.63	1.46	1.51	1.54	1.54	3.37	3.30	4.07	4.07
COTTONSEED											
World	31.50	33.75	33.14	0.99	0.95	0.94	0.94	31.24	32.20	30.80	31.16
United States	4.06	4.83	3.87	1.29	1.14	1.10	1.11	5.23	5.50	4.24	4.28
Total Foreign	27.44	28.91	29.27	0.95	0.92	0.91	0.92	26.01	26.70	26.55	26.88
China	4.84	5.53	5.36	1.49	1.28	1.38	1.34	7.22	7.07	7.20	7.20
India	6.47	7.40	7.70	0.49	0.49	0.47	0.49	3.20	3.60	3.65	3.81
Pakistan	2.57	2.50	2.70	1.15	1.16	1.14	1.15	2.95	2.90	2.97	3.09
USSR	3.53	3.45	3.33	1.27	1.45	1.32	1.37	4.49	5.02	4.39	4.58
Others	10.03	10.03	10.18	0.81	0.81	0.82	0.81	8.16	8.11	8.34	8.20
PEANUTS											
World	18.13	19.13	19.42	1.12	1.22	1.18	1.16	20.33	23.35	23.30	22.50
United States	0.63	0.66	0.66	2.62	2.74	2.96	2.83	1.64	1.81	1.97	1.88
Total Foreign	17.51	18.47	18.76	1.07	1.17	1.11	1.10	18.69	21.54	21.33	20.63
Argentina	0.19	0.15	0.16	2.34	1.79	2.39	2.39	0.45	0.27	0.37	0.37
China	3.02	2.91	2.90	2.04	1.95	2.03	1.90	6.17	5.69	6.20	5.50
India	6.74	7.80	8.10	0.79	1.15	0.96	0.99	5.30	9.00	8.00	8.00
Senegal	0.85	0.90	0.86	1.10	0.76	0.95	0.95	0.93	0.69	0.82	0.82
South Africa	0.15	0.19	0.19	1.33	1.24	1.24	1.24	0.20	0.23	0.23	0.23
Sudan	0.58	0.58	0.55	0.76	0.78	0.73	0.73	0.44	0.45	0.40	0.40
Others	5.98	5.94	6.01	0.87	0.88	0.88	0.88	5.20	5.21	5.31	5.31

CONTINUED

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TABLE 6 (Continued)  
Oilseeds Area, Yield, and Production: World and Selected Countries and Regions

Country/Region	---Area---			---Yield---				---Production---			
	Prel. 1987/88	Proj. 1988/89	1989/90	Prel. 1987/88	1989/90 Oct.	Proj. Nov.		Prel. 1987/88	1989/90 Oct.	Proj. Nov.	
	---Million Hectares---			---Metric Tons Per Hectare---				---Million Metric Tons---			
SUNFLOWERSEED											
World	15.19	15.18	16.28	1.36	1.34	1.32	1.33	20.65	20.34	21.53	21.69
United States	0.72	0.78	0.71	1.65	1.05	1.07	1.07	1.18	0.81	0.76	0.76
Total Foreign	14.48	14.41	15.56	1.34	1.36	1.33	1.34	19.46	19.53	20.77	20.92
Argentina	2.06	2.20	2.90	1.36	1.32	1.38	1.38	2.80	2.90	4.00	4.00
China	0.89	0.94	0.93	1.40	1.43	1.45	1.45	1.24	1.34	1.36	1.35
EC-12	2.21	2.06	2.04	1.79	1.88	1.57	1.57	3.95	3.87	3.23	3.21
East Europe	1.38	1.31	1.33	1.73	1.65	1.84	1.84	2.39	2.16	2.45	2.45
USSR	4.16	4.28	4.30	1.46	1.44	1.47	1.51	6.08	6.16	6.30	6.50
Others	3.79	3.62	4.06	0.80	0.86	0.85	0.84	3.02	3.10	3.44	3.42
RAPESEED											
World	16.69	17.89	17.14	1.39	1.26	1.25	1.25	23.22	22.53	21.50	21.49
Total Foreign	16.69	17.89	17.14	1.39	1.26	1.25	1.25	23.22	22.53	21.50	21.49
Canada	2.67	3.67	2.93	1.44	1.17	1.08	1.08	3.85	4.31	3.16	3.16
China	5.27	4.93	4.94	1.25	1.02	1.13	1.13	6.61	5.04	5.60	5.60
EC-12	1.86	1.84	1.60	3.20	2.83	3.10	3.10	5.95	5.20	4.96	4.95
East Europe	0.92	0.88	0.99	2.35	2.49	2.49	2.49	2.17	2.19	2.47	2.47
India	4.51	4.90	4.80	0.72	0.86	0.73	0.73	3.24	4.20	3.50	3.50
Others	1.46	1.66	1.89	0.96	0.95	0.96	0.96	1.40	1.58	1.81	1.81
FLAXSEED											
World	4.02	3.86	4.13	0.56	0.44	0.49	0.49	2.26	1.70	2.02	2.02
United States	0.19	0.09	0.09	1.01	0.45	0.88	0.88	0.19	0.04	0.08	0.08
Total Foreign	3.83	3.77	4.04	0.54	0.44	0.48	0.48	2.08	1.66	1.94	1.94
Argentina	0.69	0.55	0.60	0.80	0.82	0.82	0.82	0.55	0.45	0.49	0.49
Canada	0.59	0.50	0.64	1.23	0.74	0.92	0.92	0.73	0.37	0.59	0.59
India	1.15	1.35	1.35	0.32	0.30	0.30	0.30	0.37	0.40	0.40	0.40
USSR	1.07	1.04	1.10	0.21	0.21	0.20	0.20	0.23	0.22	0.23	0.23
Others	0.33	0.33	0.35	0.59	0.65	0.67	0.67	0.20	0.22	0.24	0.24
MAJOR OILSEEDS TOTAL	139.67	145.39	147.88	1.44	1.34	1.40	1.40	201.03	195.13	207.46	206.76
United States	28.65	29.62	29.25	2.11	1.70	2.03	2.04	60.58	50.28	59.48	59.70
Total Foreign	111.02	115.77	118.64	1.27	1.25	1.25	1.24	140.46	144.85	147.98	147.06
COPRA	--	--	--	--	--	--	--	4.32	4.52	4.70	4.70
PALM KERNEL	--	--	--	--	--	--	--	2.69	2.91	3.11	3.11
TOTAL OILSEEDS	--	--	--	--	--	--	--	208.04	202.56	215.28	214.58
PALM OIL *	--	--	--	--	--	--	--	8.39	9.33	9.97	10.02

\* Not included in total oilseeds

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TABLE 7

## Cotton Area, Yield, and Production: World and Selected Countries and Regions

Country/Region	---Area---			---Yield---				---Production---			
	Prel. Proj.			Prel. 1989/90 Proj.				Prel. 1989/90 Proj.			
	1987/88	1988/89	1989/90	1987/88	1988/89	Oct.	Nov.	1987/88	1988/89	Oct.	Nov.
	---Million Hectares---			---Kilograms Per Hectare---				---Million 480-Pound Bales---			
World	31.1	33.9	33.0	567	540	531	531	81.0	84.1	79.9	80.6
United States	4.1	4.8	3.9	791	694	676	681	14.8	15.4	12.0	12.1
Total Foreign	27.1	29.1	29.2	533	514	511	512	66.2	68.7	67.9	68.5
Maj. Foreign Exporters	12.9	13.4	13.3	763	754	753	749	45.1	46.5	45.1	45.7
Australia	0.2	0.2	0.3	1149	1538	1306	1306	1.3	1.3	1.5	1.5
Central America 1/	0.1	0.1	0.1	814	885	922	968	0.4	0.4	0.4	0.4
China	4.8	5.5	5.4	876	751	816	792	19.5	19.1	19.5	19.5
Egypt	0.4	0.4	0.4	845	718	814	774	1.6	1.4	1.6	1.5
Mexico	0.2	0.3	0.2	956	1178	917	917	1.0	1.4	0.8	0.8
Pakistan	2.6	2.5	2.7	573	578	578	573	6.8	6.6	6.9	7.1
Sudan	0.3	0.3	0.3	427	454	450	450	0.6	0.7	0.6	0.6
Turkey	0.6	0.7	0.7	916	919	887	887	2.5	3.0	2.8	2.8
USSR	3.5	3.4	3.3	700	806	726	759	11.3	12.7	11.0	11.5
Major Importers 2/	0.3	0.4	0.4	834	848	847	847	1.2	1.7	1.4	1.4
Other Foreign	13.9	15.2	15.5	313	293	300	300	19.9	20.5	21.4	21.4
Argentina	0.5	0.5	0.5	547	361	385	385	1.3	0.8	0.9	0.9
Brazil	2.2	2.3	2.4	355	307	336	327	3.5	3.3	3.7	3.6
India	6.5	7.4	7.7	247	243	240	246	7.4	8.3	8.5	8.7
Syria	0.1	0.2	0.2	751	672	844	844	0.4	0.5	0.6	0.6
Others	4.6	4.8	4.7	346	343	351	347	7.3	7.6	7.6	7.5

1/ Nicaragua, Guatemala, El Salvador, Honduras, and Costa Rica.

2/ Western Europe, Eastern Europe, Japan, Hong Kong, Republic of Korea, and Taiwan.

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TABLE 8

The table below presents a 8-year record of the difference between the November projections and the final estimates. Using world wheat production as an example, changes between November projections and the final estimates have averaged 7.2 million tons (1.5 percent) and ranged from -18.1 to 2.6 million tons. The November projection has been below the final 5 times and above the final 3 times.

## RELIABILITY OF PRODUCTION PROJECTIONS

COMMODITY AND REGION	PROJECTION AND FINAL ESTIMATES, 1981/82 – 1988/89 1/					
	Difference		Lowest	Highest	Below	Above
	Average	Average	Difference		Final	Final
	Percent	---Million Metric Tons---			Number of Years 2/	
<i>WHEAT</i>						
World	1.5	7.2	-18.1	2.6	5	3
U.S.	0.5	0.4	-1.2	0.1	6	2
Foreign	1.7	7.2	-18.2	3.8	5	3
<i>COARSE GRAINS 3/</i>						
World	1.0	7.5	-19.9	4.9	5	3
U.S.	1.6	3.1	-7.5	2.1	7	1
Foreign	1.1	6.4	-14.3	5.5	4	4
<i>RICE (Milled)</i>						
World	2.6	8.0	-16.8	2.5	7	1
U.S.	2.7	0.1	-0.2	0.2	4	3
Foreign	2.6	8.0	-16.9	2.6	7	1
<i>SOYBEANS</i>						
World	2.4	2.2	-4.4	3.6	4	4
U.S.	3.1	1.6	-2.7	2.1	2	6
Foreign	3.7	1.5	-2.3	1.8	5	3
			---Million 480-lb. Bales---			
<i>COTTON</i>						
World	2.8	2.2	-6.5	2.7	6	2
U.S.	2.8	0.3	-0.8	0.5	4	3
Foreign	3.0	2.0	-6.8	2.2	5	3
<i>UNITED STATES</i>			-----Million Bushels-----			
<i>CORN</i>	1.7	108	-250	94	7	1
<i>SORGHUM</i>	2.6	21	-53	14	5	3
<i>BARLEY</i>	2.1	10	-12	24	5	3
<i>OATS</i>	1.6	7	-18	16	5	2

1/ The final estimate for 1981/82-1987/88 is defined as the November estimate following the marketing year and for 1988/89 last month's estimate.

2/ May not total eight if projection was the same as the final.

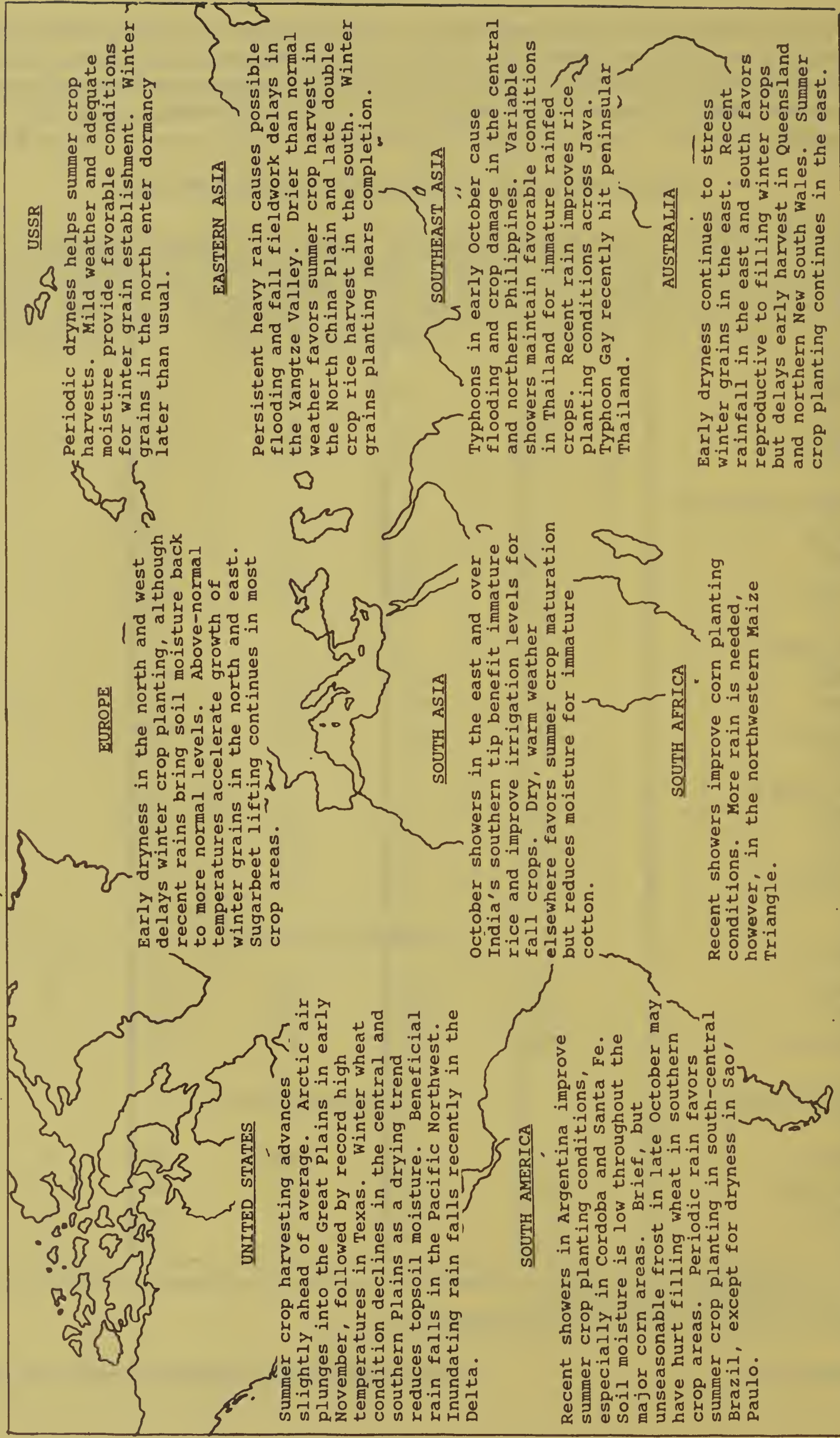
3/ Includes corn, sorghum, barley, oats, rye, millet, and mixed grain.



# WORLD AGRICULTURAL WEATHER HIGHLIGHTS

Date November 9, 1989

NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY



(More details are available in the Weekly Weather and Crop Bulletin. Subscription information may be obtained by calling (202) 447-7917.



## WEATHER BRIEFS

### RAIN IN AUSTRALIA TOO LATE TO BENEFIT WINTER GRAINS

Above normal rainfall during the last week of October and the first week of November significantly improved soil moisture reserves in Australia's Queensland and New South Wales winter grains area. The rain appeared to come too late, however, to benefit wheat and barley in this important crop region. Analysis of satellite imagery from late October showed winter grains in southern Queensland and northern New South Wales were drying down and nearly ready for harvest. Light to moderate rainfall in southern New South Wales and Victoria likely benefited less mature winter grains, but southern crop areas were not as short of soil moisture as were northern areas. The recent rain may not have helped winter grains, but the abundant soil moisture in southern Queensland and northern New South Wales should greatly benefit cotton and sorghum which will soon be planted.

### RAIN EASED DRYNESS IN WESTERN EUROPE

Widespread moderate rainfall in late October and early November eased chronically dry conditions across most of western Europe and portions of central Europe. The region experienced dry weather and generally above normal temperatures through last summer and much of the autumn. The dry, warm weather during late summer and early autumn facilitated fieldwork, but dry soils slowed the germination and establishment of fall planted grains and oilseeds, especially in France. These crops will now have some time to grow before entering winter dormancy, although decreasing daylength and cooling temperatures will limit growth. Winter crops in much of western and central Europe will likely be more vulnerable than usual to extreme winter weather because of retarded plant development.

### DRYNESS AND FROST IN ARGENTINA

Rainfall accumulation has been below normal in most of Argentina's summer crop areas this spring despite a modest increase of rainfall since winter. Light to moderate rain in early November eased dryness in the summer crop areas, but soil moisture is generally limited after last summer's severe drought. Given the limited soil moisture, this year's crops will require timely rainfall for normal development. In addition to the dryness, temperatures in the -1 to -4 degrees Celsius range on the morning of October 31 may have harmed winter grains in central Buenos Aires Province. Field reports indicate these winter grains were past their highly frost-sensitive flowering stage and were beginning grain filling. Winter grain yields may be reduced by the frost, but damage is far less likely than if the frost had occurred earlier during flowering.

## PRODUCTION BRIEFS

### JAPAN: CITRUS PRODUCTION FORECAST UP

Japanese citrus production for 1989/90 is estimated at 2.77 million tons compared to 2.67 million last year, according to the U.S. agricultural counselor in Tokyo. Production is up because of a 4-percent increase in tangerine production to 2.48 million tons. Production has increased, despite a 13-percent drop in area harvested, because tangerines are an alternate bearing crop and this is an on year for yields. Harvested area declined because the Japanese Government has been paying farmers to reduce mikan tangerine production. In the last on year for tangerines 1987/88 production was 2.94 million tons with mikan production at 2.52 million; this year mikan production is estimated at 2.07 million tons or 18 percent below the 1987/88 on year crop. The other major citrus fruit in Japan is the grapefruit-like Japanese summer orange or natsu-mikan. Natsu-mikan production for 1989/90 is estimated at 235,000 tons up 3.5 percent from last year, but down 18 percent from 1987/88. The area planted in natsu-mikan is down 20 percent from 1987/88. The reduction is reportedly due to increased competition from imported grapefruit. Orange production, excluding natsu-mikan, is estimated at 60,000 tons this year compared to 58,000 tons in 1988/89.

### THE PHILIPPINES: FRESH PINEAPPLE PRODUCTION ESTIMATE LOWERED

Estimated pineapple production in the Philippines has been reduced by 30,000 tons, from 1.66 million in April to the current level of 1.63 million tons. Excessive rainfall in the plantation areas of Mindanao caused early fruit maturation, delayed harvesting, and resulted in over-ripe fruit, much of which was unfit for canning. Even after the onset of fair weather conditions, fruit from many harvestable fields could not be gathered because of limited harvesting capabilities.

### THAILAND: REDUCTION IN FRESH PINEAPPLE CROP

The 1989 estimate of fresh pineapple production in Thailand has been reduced from 1.95 million tons to 1.90 million because mid-season drought conditions lowered yields. Although 3 percent below the first estimate, released in April 1989, the current projection indicates output this season will still exceed last year's record volume by 7 percent.

### WEST GERMANY: RENEWABLE RESOURCES PROGRAM ANNOUNCED

The West German Government has announced plans to support the conversion of agricultural crops to diesel substitutes and bio-ethanol. The pilot program is scheduled to begin in 1991 and run through 1995. This program will support an existing plant in Ahausen-Eversen and a new plant under construction near Hannover, with an annual production capacity of 70,000 tons. In addition, the program provides for the conversion of 1,000 to 2,000 agricultural engines to consume rapeseed oil as a substitute for diesel. Proposals for three additional processing facilities with an estimated total capacity of about 100,000 tons are on the drawing board.



ARGENTINA: 1988/89 CITRUS ESTIMATES REVISED

Argentine total citrus production for 1988/89 is estimated at 1.4 million tons, up 15 percent from the October estimate of 1.2 million tons, according to the U.S. agricultural counselor in Buenos Aires. Production is still estimated 13 percent below the revised 1987/88 crop estimate of 1,612,000 tons because of drought. Lemons, which had been projected at only 290,000 tons, are now estimated at 360,000 tons compared to a revised 1987/88 production level of 500,000 tons. Orange production is estimated at 600,000 tons compared to 540,000 tons projected in October, although this is down from 650,000 tons harvested last year. Tangerines are estimated at 280,000 tons, up from the 240,000 tons projected earlier and 286,000 tons produced last year. Grapefruit production is estimated at 155,000 tons versus 145,000 tons in the October projection and 176,000 tons harvested in 1987/88.

CHINA: NEW PRODUCTION TARGETS ANNOUNCED FOR 1990

The Ministry of Agriculture, Animal Husbandry, and Fisheries has announced 1990 production targets for grain and other crops. The 1990 grain target is 410 million tons, the same target level as 1989, against an actual production of 394 million tons in 1988 and an estimated 400 million tons this year. The cotton target for 1990 was lowered to 4.25 million tons (19.5 million bales), down from this year's target of 4.5 million tons (20.7 million bales). The 1990 target for oil crops is 16 million tons, unchanged from this year, but the combined target for sugarbeets and sugarcane is 66 million tons, up 1 million from the target level for 1989. The Chinese Government estimates that production of cotton, oilseeds, and sugar crops fell significantly short of target levels in 1989. Chinese agricultural production has failed to reach target levels for 5 years in a row, and the Ministry recognizes the 1990 targets will be very difficult to achieve.

WEST GERMANY: APPLE CROP LARGER THAN EARLIER FORECAST

According to the U.S. agricultural counselor in Bonn, post-harvest assessments indicate the 1989/90 commercial apple crop in West Germany will exceed the volume previously forecast. The earlier forecasts and revised estimates are as follows in 1,000 metric tons:

	<u>October 1989</u>	<u>November 1989</u>
Commercial production	770	825
Non-commercial production	970	970
Total production	1,740	1,795

## FEATURE COMMODITY ARTICLES

### WORLD PISTACHIO PRODUCTION

World production of pistachios has expanded significantly during the past decade despite the exaggerated biennial yield cycle characteristic of this crop. Preliminary assessments of commercial production during the 1989/90 season appear to verify this pattern. While the combined forecast of 67,700 metric tons (in-shell basis) represents an off-year decline of 14 percent, it potentially ranks as a record off-year production volume, as well as the third largest world crop harvested to date. Since most producing countries are reporting larger output this season, the projected downturn stems from an off-year crop of 12,700 tons in the United States. Good quality, large-sized nuts appear to be the norm this season. The percentage of nut blanking is reportedly low to average.

Near-record pistachio production is forecast in Turkey with a crop of 30,000 tons. The increase reflects favorable growing conditions, normal on-year production gains, and an expansion in bearing tree numbers.

Greek growers are expected to harvest a 3,500-ton pistachio crop during the 1989/90 season, a gain of 17 percent over last season, but below early projections due to rain damage at blossoming. Italy's production prospects were dampened by persistent drought conditions throughout the spring and summer months. However, late-season rains resulted in a substantial recovery in yield potential. The 1989/90 harvest is now expected to total 3,500 tons, substantially above last season's heavily pruned crop, but still well below Italy's production capacity during an on-year. Structural improvements provided for under new EC regulations and the Integrated Mediterranean Programs are expected to gradually strengthen the pistachio industries in both Greece and Italy. The production aids are intended to stabilize production at levels necessary to satisfy domestic demand, improve product quality, and further marketing goals.

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TABLE 9  
WORLD PISTACHIO PRODUCTION  
(1,000 Metric Tons - In-shell Basis)

	<u>1985/86</u>	<u>1986/87</u>	<u>1987/88</u>	<u>1988/89</u>	<u>1989/90</u> 1/
Greece	2.3	2.3	4.0	3.0	3.5
Italy	2.0	0.3	4.0	0.3	3.5
Syria	12.0	14.3	12.5	17.9	18.0
Turkey	33.0	20.0	25.0	15.0	30.0
United States	12.3	34.0	15.0	42.6	12.7
TOTAL	61.6	70.9	60.5	78.8	67.7

1/ Preliminary

Note: Iran is excluded from this report due to lack of current, verifiable information.

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## WORLD WALNUT PRODUCTION

The world's leading walnut producing countries are expected to harvest a 1989/90 crop of 463,200 tons (in-shell basis), 3 percent below the 1988/89 level. Production in the United States is projected at 190,500 tons, up 2 percent from last year due to good weather. Reportedly, quality is good and the percentage of sound nuts is 1 percent greater than last year.

China's 1989/90 walnut harvest is projected at 151,000 tons, 15 percent below the record 1988/89 volume. Even though this season is an off-year in the bearing cycle, growing conditions have been generally favorable in most regions, and the number of bearing trees has increased due to recent plantings. Late season rains in Yunnan Province delayed harvesting, but reportedly had only a minimal effect on crop volume or quality. Two of the smaller producing provinces, Guizhou and Beijing, experienced severe drought conditions throughout the season.

During the late 1970's, China's Ministry of Forestry recognized the walnut industry as an important source of cash income for farmers, as well as an effective method of erosion control. To date, the Ministry of Forestry continues its active support of the industry via research programs on improved varieties and cultivation techniques. In addition, grafted seedlings and pesticides are provided at subsidized prices along with free extension services that instruct and assist growers on top grafting, pruning, planting densities, proper fertilizer application, and irrigation methods.

Walnut production in Turkey has been declining for several years. The 1989/90 crop is currently pegged at 62,000 tons, 3 percent less than last year, and, potentially, the smallest crop harvested during the past 30 years. The downward trend can be attributed to drier weather in recent years and declining tree numbers. High domestic prices for walnut lumber have encouraged tree cuttings in excess of plantings.

France, India, and Italy are smaller-volume walnut producers. The 1989/90 French harvest is currently forecast at 24,700 tons, 15 percent greater than the 1988/89 volume, due to favorable weather conditions and the normal recovery in yield potential following a poor crop. Walnut production in Italy is projected to rebound to 18,000 tons. An on-year in the bearing cycle and generally good growing conditions are expected to offset the steady reduction in harvested area and declining productivity of Italy's old walnut trees. Prospects for India's 1989/90 walnut crop were dampened by generally abnormal weather patterns throughout the season. Output during the 1989/90 season is expected to equal last year's volume of 17,000 tons. A crop of 20,000 tons is considered normal. Damp weather has not only delayed harvesting of the crop by approximately 2 weeks, but also has caused shells to develop hull marks. Reportedly, kernel quality has not been affected.

TABLE 10

WORLD WALNUT PRODUCTION  
(1,000 Metric Tons - In-shell Basis)

	1985/86	1986/87	1987/88	1988/89	1989/90 <u>1/</u>
China	121.9	115.0	147.0	177.1	151.0
France	23.3	27.9	26.5	21.5	24.7
India	22.0	23.0	20.0	17.0	17.0
Italy	14.0	12.0	20.0	11.0	18.0
Turkey	70.0	68.0	65.0	64.0	62.0
United States	198.7	163.3	224.1	186.9	190.5
TOTAL	449.9	409.2	502.6	477.5	463.2

1/ Preliminary

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## WORLD PRODUCTION OF DRIED PRUNES

France, Yugoslavia, and the United States are the leading commercial producers of dried prunes in the Northern Hemisphere. Their combined output of dried prunes for the 1989/90 season is expected to increase by 15 percent over last season to an estimated 222,970 tons. A near-record pack of 185,970 tons is being projected for the United States. Reportedly, the pack is in good condition and heavy yields are anticipated, despite minor hail damage in some areas. The dry-away ratio is expected to be near normal.

Dried prune production in Yugoslavia is expected to increase for the third consecutive year. The 1989/90 pack is forecast at 14,000 tons, up 9 percent from last year, mainly due to a larger fresh plum crop. However, current assessments of the Yugoslav industry point to a gradual long-term decline given the imbalance between the present removal rate of old and diseased trees vis-a-vis new plantings.

France's 1989/90 prune pack, currently estimated at 23,000 tons, is expected to be the smallest produced since the 1980/81 season. Although some of the decline reflects the normal drop in yield potential following a record crop, hail storms and generally unfavorable weather conditions throughout most of the growing cycle resulted in the loss of a substantial amount of fresh prunes. Reportedly, the overall quality of the pack is satisfactory, with larger than average fruit sizes.

The forecast of 1988/89 dried prune production in the Southern Hemisphere has been revised upward from the May 1989 level of 17,750 tons to 18,197 tons. The increase reflects a larger than anticipated pack in South Africa.

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TABLE 11

WORLD PRODUCTION OF DRIED PRUNES

	<u>1987/88</u>	<u>1988/89</u>	<u>1989/90</u> <u>1/</u>
<u>NORTHERN HEMISPHERE</u>			
France	30,380	41,000	23,000
Yugoslavia	12,387	12,873	14,000
United States	207,745	140,610	185,970
TOTAL	250,512	194,483	222,970
<u>SOUTHERN HEMISPHERE</u>			
Argentina <u>2/</u>	11,000	5,000	N/A
Australia <u>2/</u>	1,749	3,500	N/A
Chile <u>2/</u>	9,000	7,000	N/A
South Africa <u>3/</u>	2,752	2,697	N/A
TOTAL	24,501	18,197	N/A
WORLD TOTAL	275,013	212,680	N/A

1/ Preliminary2/ Estimate as of May 19893/ Revised November 1989

November 1989

Foreign Production Estimates Division, FAS, USDA



## WORLD PRODUCTION OF RAISINS AND SULTANAS

The 1989/90 raisin/sultana pack in the Northern Hemisphere is forecast at 548,115 tons, 2 percent below the 1988/89 volume. Although output in the United States is expected to increase for the third consecutive year to a near-record level of 336,115 tons, prospects do not appear as favorable for the other leading producers. The 1989/90 Turkish pack is projected to decline by 13 percent to 130,000 tons, primarily due to a dry growing season. The impact of the drought was partially mitigated by irrigation from private wells and expansion of harvested area by newly bearing vines. The continuing dry weather hastened harvesting and enabled growers to dry and pack a good quality product.

Greek sultana production is forecast at 75,000 tons, 9 percent smaller than last year, due to early season drought conditions, high winds late in the growing season, and scattered rains during the drying stage. These factors compromised both size and coloring quality of 1989/90 Greek pack. The Government does not encourage area expansion. The primary emphasis rests on improving yields, eradicating phyloxera disease, and producing a better quality product.

The 1989/90 pack in Mexico is currently forecast at 7,000 tons, down more than one-third from last year, due to heat stress during flowering and the continuing diversion of grapes for fresh market sale. The quality of this season's pack is reportedly excellent with a high sugar to acid ratio.

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TABLE 12

WORLD PRODUCTION OF RAISINS/SULTANAS  
(Metric Tons - Packed Weight Basis)

	<u>1987/88</u>	<u>1988/89</u>	<u>1989/90</u> 1/
<u>NORTHERN HEMISPHERE</u>			
Greece	40,000	82,000	75,000
Mexico	11,250	11,000	7,000
Turkey	110,000	150,000	130,000
United States	303,947	315,776	336,115
Total	465,197	558,776	548,115
<u>SOUTHERN HEMISPHERE</u>			
Argentina 2/	6,600	4,000	N/A
Australia 3/	74,029	60,000	N/A
Chile 2/	13,500	16,200	N/A
South Africa 3/	27,448	20,587	N/A
Total	121,577	100,787	N/A
WORLD TOTAL	586,774	659,563	N/A

1/ Preliminary

2/ Forecast as of May 1989

3/ Revised November 1989

NOTE: U.S. data reported on packed weight basis. Data for Afghanistan and Iran not available.

November 1989

Foreign Production Estimates Division, FAS, USDA



## USSR SPRING WHEAT PRODUCTION

USSR is the world's largest producer of spring wheat. During the 1979-1988 period, Soviet total wheat production averaged 83.8 million tons annually, of which spring wheat averaged 38.9 million tons. Spring wheat production in the USSR peaked in 1973 with an output of 60.3 million tons and declined to 30.0 million last year. The reduction in spring wheat production is the result of a steady shift of area from wheat to coarse grains, fodder crops, and fallow. Spring wheat yields have shown no significant increase during the last two decades although annual swings have recently been somewhat dampened by increased summer fallow associated with the Intensive Technology program.

Soviet spring wheat production is unique and dynamic. Most spring wheat is grown in the "New Lands", the area extending from the east bank of the Volga river eastward to the foothills of the Altai mountains. Cultivation of the New Lands began in the mid-1950's with spring wheat replacing the native steppe grasses. The climate is characteristically harsh and capricious with meager, unreliable rainfall. The growing season is a narrow window demanding intense farm operations, such as planting, over vast areas. In comparing the New Lands with the spring wheat areas of the American northern Great Plains or the Prairie Provinces of Canada, the differences are greater than the similarities. The New Lands have superior soils, different cultivars, and, importantly, lie much farther north.

Foreign Agricultural Service personnel traveled August 23-September 8, 1989, in several of the main Soviet spring wheat regions in the New Lands. The purpose was to study the economic and technical aspects of the production and utilization of spring wheat. Areas visited included Saratov (Volga economic region), Orenburg (Ural economic region), Barnaul (West Siberia economic region), and Tselinograd (Kazakhstan economic region). This report summarizes the observations made and information obtained during that trip.

The 1989 spring wheat crop had just been harvested or was being harvested during the team's visit. The itinerary unfortunately did not include some of the most drought-affected areas of the New Lands. Observed yields were variable but in general were at or below the 10-year average. This year's spring wheat crop had excellent sowing conditions and good/very good vegetative growth, but excessive temperatures and drought beginning at the early reproductive stage negatively affected yield. Crop quality, however, was judged as excellent.

Perestroika is changing the economic structure in general, and agriculture in particular, causing a re-evaluation of traditional economics, technologies, and practices associated with the production of spring wheat. The spring wheat producers -- "sovkhoz" (state farm) directors -- visited are excellent agronomists and farmers. Expertise is based on experience, a history of trial and error. Farmers must operate within the context of a poorly developed infrastructure, for example, transport, processing, and storage.

Farm directors are able to exercise greater control of their own operations than possible two years ago. In this new age of cost consciousness, flexibility allows producers to determine the proper mix of commodities grown, input levels, and capital expenditures. There is much discussion as to the correct management of local resources in terms of economics and rural human needs.

In light of the severe climate, competent farm management is a necessity in the spring wheat zone. Cereal production is a marginal operation in this region where extensive livestock production would perhaps be a more rational use of the land. In the New Lands, the great majority of farms are large, mixed operations. The choice of commodities produced depends on the farm's structure, local climate, and needs, with attention paid to prices and relative commodity profitabilities. Many farm directors feel that crop rotations have previously been excessively rich in cereals and deficient in fodder and oilseeds. Experimentation is readily apparent in the form of new crop trials, such as early-maturing corn and sorghums to be used as fodder, sowing of winter wheat, increased use of direct combining, and rethinking of traditional concepts, including the relevance of summer fallow.

Plant breeding support is somewhat equivocal--old varieties tend to be the dominant field cultivars. The more western spring wheat areas visited, Saratov and Orenburg, tended to devote relatively more of their wheat area to durum than the eastern New Lands. The old variety Kharkhov 46 commonly covered over 75 percent of all durum area. Saratov 29, bred over 30 years ago, is still the predominant spring bread wheat. Breeders face the difficult quest for higher yields while being aware of the need for stable yields in the recurring years of drought.

The issue of Intensive Technology (IT) is enigmatic. This program, which began in 1985, is designed to increase grain yields by means of improved agronomics. Winter wheat grown in European USSR has received the main emphasis, with IT centered on higher rates of agrochemical applications and clean summer fallow. The concept of IT, however, is dependent upon the region, being different in the New Lands. There, IT may be defined as adequate agronomic practices and minimum costs in the context of a marginal agricultural climate. Soviet IT is not to be confused with intensive cereals management as seen in western Europe.



## SPECIFIC AGRONOMIC OBSERVATIONS

### Wheat Varieties:

- o Bread ("strong") wheat
  - o Saratov 29 (the most commonly sown variety), 36, 39, 42, 55
  - o Albidum 43
  - o Lutestsens 62, 68
  - o Vega
  - o Omsk 9
  - o Altai 81
  - o Tselinny 60, 87
  - o Novosibirsk 67
  - o Altaiski Neva
  - o Tselinny Jubilee
- o Durum wheat
  - o Kharkov 46 (the most commonly sown variety), 36
  - o Bezenchuk 131
  - o Melianopus 26, 69
  - o Saratov 40, 41, 57
  - o Orenburg 2, 10
  - o Altaika 80

### Common Spring Wheat Diseases in the New Lands:

- o Leaf Rust (Puccinia graminis tritici)
- o Loose Smut (Ustilago tritici)
- o Bunt Smut (Tilletia spp.)
- o Root Rot (Helminthosporium spp.)
- o Root Crown Rot (Fusarium/Gibberella spp.)

### Weeds/Weed Control:

- o Wild Oats (Avena fatua) are the greatest problem.
- o The new emphasis on cost-accountability has led to reduced/no use of herbicides, somewhat weedier fields, and increased emphasis on cultivation practices to control weeds.
- o Eloxan, Avidex, Fargo, and 2-4,D were mentioned as herbicides in common use.

### Cultivation/Phenology Schedule for Spring Wheat:

August/September	Fall fertilizer /broadcast /disc
November/March	Plowing/moisture-snow retention
April/May	Phosphorus application, seedbed preparation, sowing (May 10-15 peak)
Late May/Early June	Apply herbicides, pesticides, fungicides
June 25-July 10	Reproductive Stage
July 25-August 31	Harvest

### Crop Rotations:

- o 7-field rotations were most commonly reported, for example:
  - o fallow/perennial grasses
  - o durum
  - o bread wheat
  - o barley
  - o barley
  - o corn
  - o millet
- o 6-field rotations also were mentioned, for example:
  - o perennial grasses
  - o durum
  - o durum
  - o peas
  - o bread wheat
  - o oats

### Tillage practices:

- o Fallow, a common practice since roughly 1982, now occupies about 15 percent of the arable area.
- o Minimum tillage is practiced in some areas, particularly near Barnaul, Western Siberia.
- o Planting by calendar date is not emphasized. Many farms reportedly use staggered planting dates and sow several varieties in order to reduce risks.
- o Some farm directors said that new seed was purchased only once every 3-5 years.
- o Farms often plant winter crops, spring crops, and late grain crops (corn, millet, sorghum) in order to ensure some degree of output stability.



- o Fodder crop experimentation, with surprisingly good results at nearly 55 degrees north latitude, was quite evident. Early maturing corn and sorghum varieties from Krasnodar, Moldavia, Hungary, and Yugoslavia are being tested.
- o Concern was expressed over soil degradation and loss of organic matter, in part related to the common practice of removing the straw from fields for use as livestock fodder. Some farm directors are beginning to leave varying amounts of straw in the field.
- o Snow retention practices during the winter are of great importance in northern Kazakhstan where a reported 80 percent of the moisture needed during the vegetative period was derived from snow-melt.
- o Direct combining is gaining popularity. Farmers report a yield increase of 10 percent over the two-stage (swath and combine) method, although some loss of quality was noted.
- o Grain losses were attributed to 2-stage harvesting, pneumatic cleaning during harvest, poor weather at harvest, and poor quality combines.

#### Fertilizer Use:

- o The low average annual precipitation precludes intensive fertilizer application and often inhibits fertilizer efficiency. Some farms apply fertilizers only once every 2-4 years.
- o No shortage of phosphorus or nitrogen fertilizers was reported.

#### Production Costs:

- o In Saratov, the following breakout of spring wheat production costs was given:

	<u>Percent of Total Cost</u>
wages	15
seed costs	21
fuel, lubrication	5
fertilizer	10
transport	8
repair/amortization	27
other	14

Table 13

## USSR: WHEAT YIELDS

1955-1988

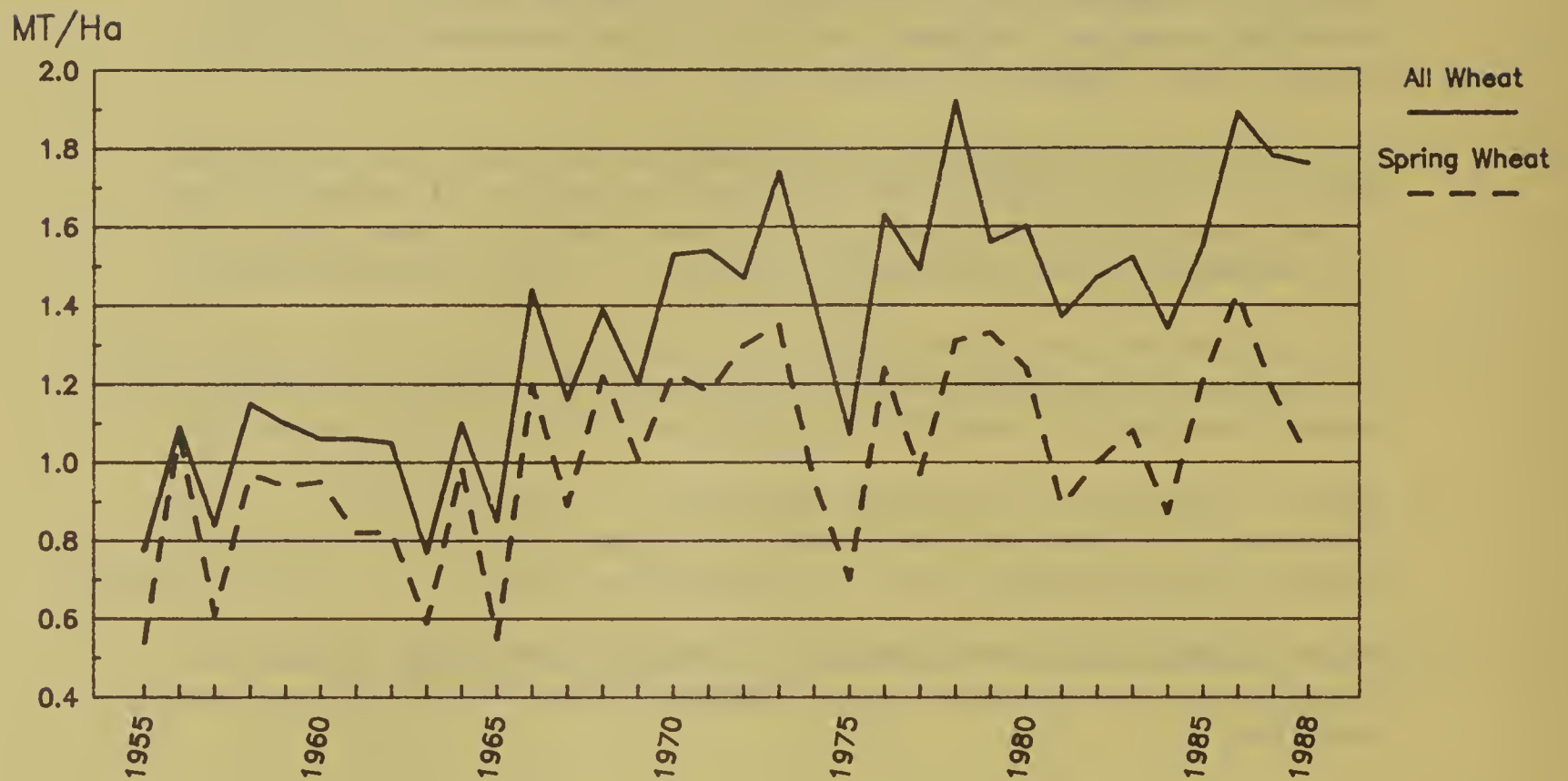
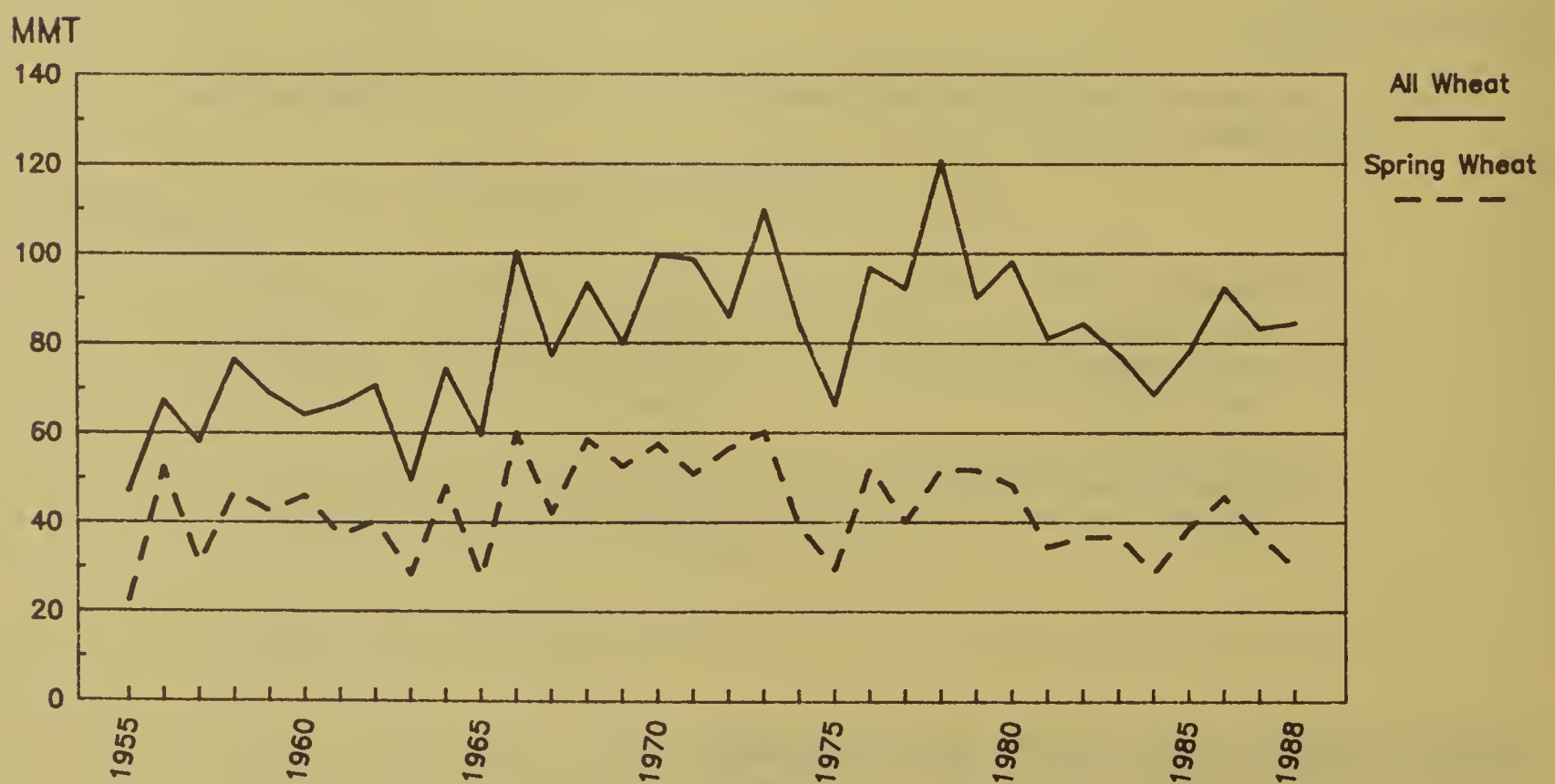


Table 14

## USSR: WHEAT PRODUCTION

1955-1988





## AFRICAN 1989/90 TOTAL GRAIN PRODUCTION 1/

African total grain production for 1989/90 is estimated at 83.9 million tons, down 7.2 million or 8 percent from last year's record harvest. This year's crop, however, is the continent's second largest. The performance of the 1989 summer rainfall season was, in general, very good with timely, generous precipitation. Locusts posed no serious threat to grain crops this year although grasshoppers have caused local damage in West Africa.

In North Africa, total grain production for 1989/90 is estimated at 20.8 million tons, up 0.6 million or 3 percent from 1988/89. Morocco harvested a bumper 7.4 million ton grain crop. Wheat and barley production in Tunisia totaled 0.6 million tons, up from last year, but still an extremely small crop.

In East Africa, total grain output for 1989 is estimated at 19.1 million tons, down 1.3 million or 6 percent from 1988. An average crop of 4.4 million tons is estimated for Ethiopia, although small harvests are expected in the northern regions. Output in the Sudan is estimated at 3.9 million tons, down from last year's record of 5.1 million, but a good harvest nevertheless. Drought affected sorghum and millet production in the subsistence agricultural areas of western and northern Sudan, but rainfall was favorable in the eastern mechanized region. A record grain harvest of 4.8 million tons is estimated for Tanzania.

In West Africa, total grain production this year is estimated at 21.0 million tons, down 2.2 million or 9 percent from last year's record. This year's grain output is the region's third largest. Rainfall associated with the 1989 June through October north/south movement of the Intertropical Convergence Zone was generally favorable. Exceptions included Niger and Cape Verde where grain production is estimated significantly lower than in 1988.

In Central Africa, total grain production is estimated at 2.1 million tons, virtually unchanged from last year.

In Southern Africa, grain output is estimated at 20.8 million tons, down 4.4 million or 17 percent from 1988. The reduction is attributed primarily to lower corn production in South Africa. Last year's South African corn harvest of 11.7 million tons was the impetus behind the region's 1988 bumper harvest. The 1989 South African corn crop will be planted during November/December 1989 and harvested from May through July of next year.

1/ Total grain production is defined as the sum of wheat, coarse grains, and paddy (rough) rice. Regions are defined in the accompanying grain production table.

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Table 15

AFRICA: TOTAL GRAIN PRODUCTION  
(1000 Metric Tons)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
<i>North Africa</i>										
Algeria	2,418	2,186	1,525	1,289	3,051	3,089	2,404	2,076	1,779	1,892
Egypt	8,161	8,162	8,518	8,689	8,563	8,615	9,335	9,576	9,956	10,670
Libya	212	244	231	191	200	200	240	290	210	220
Morocco	4,437	2,077	4,872	3,529	3,723	4,678	7,781	4,291	7,921	7,389
Tunisia	1,165	1,233	1,255	922	1,024	2,067	607	1,898	284	621
Total	16,393	13,902	16,401	14,620	16,561	18,649	20,367	18,131	20,150	20,792
<i>East Africa</i>										
Burundi	295	420	309	320	274	320	337	338	338	318
Ethiopia	4,247	4,240	5,277	4,599	3,520	3,855	4,960	4,330	5,055	4,390
Kenya	2,296	3,186	2,923	2,562	2,073	3,331	3,433	2,993	3,468	3,414
Rwanda	262	281	304	328	255	324	272	266	274	294
Somalia	253	372	392	358	475	557	651	565	544	517
Sudan	2,790	3,932	2,429	2,302	1,367	4,230	3,845	1,640	5,125	3,890
Tanzania	2,415	2,528	2,556	2,938	3,208	3,630	3,755	4,066	4,030	4,799
Uganda	1,044	1,142	1,321	1,365	1,426	1,500	1,545	1,585	1,520	1,430
Total	13,602	16,101	15,511	14,772	12,598	17,747	18,798	15,783	20,354	19,052
<i>West Africa</i>										
Benin	341	358	347	349	472	522	517	396	563	499
Burkina	1,003	1,200	1,113	1,060	1,106	1,581	1,898	1,597	2,109	1,691
Chad	648	527	474	489	348	705	730	600	826	673
Gambia, The	69	94	104	58	87	127	143	102	146	130
Ghana	674	725	544	308	912	772	898	959	1,058	1,128
Guinea	488	463	524	510	531	572	658	615	619	597
Guinea-Bissau	31	50	95	78	105	115	120	154	157	146
Ivory Coast	856	841	930	812	1,098	1,083	1,043	1,081	1,313	1,296
Liberia	268	245	267	289	298	288	295	300	297	300
Mali	948	1,112	1,019	1,444	1,087	1,442	1,729	1,550	2,396	1,576
Mauritania	34	82	54	33	29	57	137	152	175	176
Niger	1,764	1,681	1,691	1,730	1,070	1,758	1,875	1,418	2,350	1,711
Nigeria	9,460	9,526	10,018	7,568	9,603	9,333	9,512	7,657	9,417	9,109
Senegal	675	924	772	522	705	1,243	758	1,050	864	1,099
Sierra Leone	547	533	518	561	497	529	549	567	491	546
Togo	290	289	304	289	322	386	333	356	460	370
Total	18,096	18,650	18,774	16,100	18,270	20,513	21,195	18,554	23,241	21,047
<i>Central Africa</i>										
Cameroon	901	839	939	862	727	943	910	880	901	920
Central African Republic	87	101	90	80	95	105	95	122	133	125
Zaire	921	971	982	1,038	1,040	1,066	1,042	1,097	1,127	1,097
Total	1,909	1,911	2,011	1,980	1,862	2,114	2,047	2,099	2,161	2,142
<i>Southern Africa</i>										
Angola	440	328	326	356	336	332	323	297	340	292
Botswana	41	56	27	18	9	18	21	27	85	60
Lesotho	193	170	123	123	118	167	134	198	120	155
Madagascar	2,236	2,132	2,218	2,279	2,272	2,318	2,383	2,285	2,355	2,431
Malawi	1,203	1,279	1,448	1,402	1,432	1,388	1,330	1,252	1,380	1,430
Mozambique	478	505	578	397	441	534	514	403	462	522
South Africa, Republic of	16,773	11,160	6,901	6,922	11,215	10,537	10,240	11,032	15,885	11,471
Swaziland	104	101	58	57	117	92	100	93	82	117
Zambia	1,043	1,322	854	1,054	1,001	1,263	1,325	1,152	2,003	1,813
Zimbabwe	3,254	2,261	1,312	1,692	3,282	3,058	1,559	2,784	2,485	2,534
Total	25,765	19,314	13,845	14,300	20,223	19,707	17,929	19,523	25,197	20,825
TOTAL AFRICA	75,765	69,878	66,542	61,772	69,514	78,730	80,336	74,090	91,103	83,858

FAS, USDA

NOVEMBER 1989



## WORLD SUGAR PRODUCTION

The forecast for 1989/90 world centrifugal sugar production is 105.7 million tons (raw value). This represents a reduction of 1 percent (1.6 million tons) from the first forecast in May 1989 and 100,000 tons above the revised 1988/89 outturn. World sugar production from cane is forecast at 67.8 million tons, down 1 percent from 1988/89, while sugar from beets is up 2 percent to 37.9 million tons.

In the European Community (EC), which accounts for 14 percent of the world's total, 1989/90 sugar production is forecast at 14.7 million tons, 1 percent more than the May forecast but 1 percent less than a year earlier. In France, the largest sugar producer in the EC, the forecast is 4.1 million tons, 6 percent (272,000 tons) less than produced last year. The 1989/90 sugar yields are forecast to be the second highest on record, exceeded only by last year's harvest. In the United Kingdom output is forecast down 4 percent from May and 6 percent from the previous year. A very mild winter in the United Kingdom coupled with an early spring and summer drought led to lowered expectations for the beet crop. Although the early-season weather led to fears of extensive aphid infestation and predictions of a virus yellows epidemic, farmers took the necessary precautions so neither condition was a problem. Partially offsetting the decline in the United Kingdom was a 2-percent increase from the May forecast in Italy. The favorable weather that boosted beet production in the north and central producing areas more than offset a 20-percent drop in southern Italy. Italian sugar output for 1989/90 is expected to be up by 14 percent (221,000 tons) from the below-average 1988/89 crop.

In India, the world's largest sugar producer, the forecast for 1989/90 sugar production is 10.4 million tons, down 5 percent (530,000 tons) from May but 3 percent more than the previous season. High prices and increased area planted to sugarcane, resulting in a larger cane crop, are the major factors contributing to the increase over last year. However, continued price competitiveness from khandsari and gur units is expected to cause major diversions of sugarcane away from mills again this year.

In the Soviet Union, the world's second largest producer, the forecast for 1989/90 sugar production is 9.0 million tons, 5 percent (500,000 tons) less than expected in May but 1 percent more than last year. Although harvested area is estimated to be down by 30,000 hectares, this year's sugar outturn is likely to be higher than a year ago because of more favorable weather conditions and the increasing use of intensive technology. This year's potential harvest is reportedly one of the best in recent years. However, frequent rains during the peak of harvest and chronic infrastructure problems, including shortages of fuel, transportation bottlenecks, a lack of refining equipment, and a shortage of spare parts, could hinder production of centrifugal sugar. Consequently, the harvest and processing pace has been likened to that of last year, which continued until snow fell, leaving many beets to go to waste in the fields.

In Brazil, sugar production is forecast at 7.5 million tons, down 7 percent (600,000 tons) from the earlier forecast and 13 percent less than produced in 1988/89. The reduction in sugar output is a direct result of an increase in

demand for fuel alcohol. The sugarcane harvest for 1989/90 is expected to be a relatively good one with no reports of major weather or disease problems. Although total area planted to cane for sugar and alcohol production is down slightly from a year ago, the production of raw material is expected to be up by 2 percent. Out of the total cane area of 4.1 million hectares, almost half, or 1.9 million hectares, will be devoted to sugar production. The Brazilian sugar/alcohol sector continues to be in disarray because of strong world market prices for sugar and the strong demand for fuel alcohol. The crux of the problem is meeting the domestic demand for alcohol, now forecast to be in short supply beginning in 1990. Although official plans call for the 1989/90 cane crop to be used first to supply alcohol for the domestic market, there is considerable opposition from sugar refiners who would rather produce sugar for export.

Cuban sugar production is forecast at 8.0 million tons, unchanged from May but down by 100,000 tons from a year ago.

The sugar production forecast for China is 5.3 million tons, down 4 percent from the first forecast but 4 percent more than produced in the previous season. The current forecast is for 750,000 tons of sugar from beets and 4,550,000 tons of sugar from cane. The decline from the May outlook stems from a sharp decline in the estimated sugarbeet harvest in Heilongjiang Province where about half of the country's beet sugar is produced. The area sown to beets in Heilongjiang was less than 75 percent of the original plan. During the growing season most of the sown area was affected by drought and about 37,000 hectares were abandoned.

In Thailand, sugar production is forecast at 4.0 million tons, 18 percent (600,000 tons) more than forecast in May and nearly the same level as a year ago. The increased optimism is a result of favorable weather, increased use of inputs, and the continued expansion of seeded area. Heightened grower interest in cane is mainly attributable to the strong world sugar market that increased the farmgate price of cane by 14 percent. Relocation of some crushing plants into nontraditional regions also has spurred production.

In the Philippines, the sugar forecast is 1.75 million tons, up 100,000 tons from the first forecast and 150,000 tons more than the previous season. Philippine sugar production continues to rise after bottoming out in 1986/87 at 1.35 million tons. The projected increase is attributed to higher estimated area and an expected improvement in recovery rates. Growing season weather has been generally favorable for sugarcane thus far in 1989/90. High domestic sugar prices have prompted producers to use more production inputs and to improve farming practices. However, sugar industry officials express concern about the potential impact of the Comprehensive Agrarian Reform Program while some planters continue to encounter problems with civil disturbances.

In South Africa, sugar production is forecast at 2.4 million tons, 200,000 tons more expected than earlier but down 70,000 tons from last year's revised estimate. In a landmark announcement on August 31, 1989, the South African cabinet gave approval for the sugar industry to continue planning for the establishment of a major ethanol production facility for producing an octane enhancing blend for gasoline. The facility is expected to generate major socio-economic benefits, as well as substantially expanded sugar cane



production, for Natal, KwaZulu, and the eastern Transvaal Lowveld.

In Australia, the sugar production forecast is 3.8 million tons, unchanged from the May forecast but 1-percent more than the previous season. Following the Government's removal of a 66-year old embargo on sugar imports and deregulation of the Australian price-setting mechanism in July 1989, the highest world sugar prices in 8 years have been reached, greatly benefiting the Australian sugar industry.

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WORLD CENTRIFUGAL SUGAR PRODUCTION  
1986/87 \_ 1989/90 1/

<u>COUNTRY/REGION</u>	<u>1986/87</u>	<u>1987/88</u>	<u>1988/89 2/</u>	<u>1989/90 3/</u>
	-----1,000 Metric Tons-----			
NORTH AMERICA				
Canada	118	129	108	135
Mexico	3,970	3,806	3,678	3,500
United States <u>3/ 4/</u>	6,246	6,483	6,214	6,427
SUBTOTAL	10,334	10,418	10,000	10,062
SOUTH AMERICA				
Argentina	1,108	1,177	1,280	900
Bolivia	190	174	163	155
Brazil	8,650	8,457	8,580	7,500
Chile	444	416	424	450
Colombia	1,316	1,344	1,437	1,472
Ecuador	268	316	309	330
Guyana	204	168	155	175
Paraguay	100	100	90	100
Peru	580	592	580	590
Surinam	12	10	10	10
Uruguay	92	65	75	75
Venezuela	601	537	510	500
SUBTOTAL	13,565	13,356	13,613	12,257
CENTRAL AMERICA				
Belize	86	85	85	85
Costa Rica	230	219	211	220
El Salvador	267	189	173	200
Guatemala	660	690	715	735
Honduras	200	173	197	200
Nicaragua	240	225	200	225
Panama	123	107	110	110
SUBTOTAL	1,806	1,688	1,691	1,775
CARIBBEAN				
Barbados	83	80	77	66
Cuba	7,220	7,400	8,100	8,000
Dominican Republic	815	777	810	850
Guadeloupe	71	87	88	60
Haiti	39	40	40	40
Jamaica	192	221	204	225
Martinique	1	1	1	1
Puerto Rico	87	92	88	85
St. Kitts - Nevis	32	32	32	32
Trinidad and Tobago	84	91	95	98
SUBTOTAL	8,624	8,821	9,535	9,457

CONTINUED



(CONTINUED)

WORLD CENTRIFUGAL SUGAR PRODUCTION  
1986/87 \_ 1989/90 1/

<u>COUNTRY/REGION</u>	<u>1986/87</u>	<u>1987/88</u>	<u>1988/89</u> <u>2/</u>	<u>1989/90</u> <u>3/</u>
	-----1,000 Metric Tons-----			
EEC				
Belgium-Luxembourg	1,019	1,005	1,005	960
Denmark	542	422	550	490
France 5/	3,707	3,966	4,372	4,100
Germany, West	3,469	2,968	3,015	3,200
Greece	312	194	230	340
Ireland	202	242	212	200
Italy	1,868	1,869	1,609	1,830
Netherlands	1,324	1,065	1,075	1,200
Portugal	4	2	1	3
Spain	1,109	1,092	1,289	1,040
United Kingdom	1,433	1,335	1,425	1,345
SUBTOTAL	14,989	14,160	14,783	14,708
OTHER WEST EUROPE				
Austria	308	390	358	480
Finland	134	70	147	150
Sweden	368	264	375	375
Switzerland	129	123	150	135
SUBTOTAL	939	847	1,030	1,140
EAST EUROPE				
Albania	35	30	30	30
Bulgaria	113	140	100	120
Czechoslovakia	862	800	700	800
Germany, East	733	768	575	670
Hungary	506	450	475	500
Poland	1,891	1,823	1,825	1,820
Romania	600	450	450	600
Yugoslavia	870	946	660	800
SUBTOTAL	5,610	5,407	4,815	5,340
USSR	8,700	9,560	8,900	9,000
NORTH AFRICA				
Algeria	11	11	11	11
Egypt	989	907	948	970
Morocco	435	443	527	510
Sudan	479	485	550	550
Tunisia	26	25	25	25
SUBTOTAL	1,940	1,871	2,061	2,066

CONTINUED

(CONTINUED)

WORLD CENTRIFUGAL SUGAR PRODUCTION  
1986/87 \_ 1989/90 1/

<u>COUNTRY/REGION</u>	<u>1986/87</u>	<u>1987/88</u>	<u>1988/89 2/</u>	<u>1989/90 3/</u>
	-----1,000 Metric Tons-----			
OTHER AFRICA				
Angola	35	35	35	35
Burkina	20	20	20	20
Cameroon	80	80	80	80
Chad	25	20	20	20
Congo (Brazzaville)	35	35	35	35
Ivory Coast	140	140	154	160
Ethiopia	167	170	170	175
Gabon	20	20	20	20
Ghana	10	10	10	10
Guinea	25	25	25	25
Kenya	366	413	412	420
Madagascar	111	114	114	110
Malawi	168	181	170	175
Mali	19	20	20	20
Mauritius	748	733	672	615
Mozambique	30	50	50	50
Nigeria	59	55	50	50
Reunion	255	236	262	200
Rwanda	2	4	5	5
Senegal	50	60	60	60
Somalia	45	45	45	50
South Africa	2,200	2,235	2,470	2,400
Swaziland	537	461	464	450
Tanzania	101	108	110	110
Uganda	10	10	10	30
Zaire	63	60	60	60
Zambia	119	130	150	140
Zimbabwe	512	453	480	400
SUBTOTAL	5,952	5,923	6,173	5,925
<hr/>				
MIDDLE EAST				
Iran	550	450	450	450
Iraq	35	43	43	43
Lebanon	6	6	6	6
Syria	38	40	20	25
Turkey	1,475	1,780	1,410	1,520
SUBTOTAL	2,104	2,319	1,929	2,044

CONTINUED

November 1989

Foreign Production Estimates Division, IAS/USDA



(CONTINUED)

WORLD CENTRIFUGAL SUGAR PRODUCTION  
1986/87 \_ 1989/90 1/

<u>COUNTRY/REGION</u>	<u>1986/87</u>	<u>1987/88</u>	<u>1988/89</u> <u>2/</u>	<u>1989/90</u> <u>3/</u>
	-----1,000 Metric Tons-----			
OTHER ASIA				
Afghanistan	10	10	10	10
Bangladesh	194	190	115	145
Burma	50	50	50	50
China	5,774	4,706	5,100	5,300
India <u>6/</u>	9,474	10,000	10,150	10,420
Indonesia	2,024	2,127	1,889	2,000
Japan	948	929	984	945
Malaysia	98	88	100	105
Nepal	17	17	17	17
Pakistan	1,364	1,907	1,980	2,040
Philippines	1,350	1,400	1,600	1,750
Sri Lanka	20	34	35	35
Taiwan	515	627	589	580
Thailand	2,639	2,704	4,024	4,000
Vietnam	250	250	250	250
SUBTOTAL	24,727	25,039	26,893	27,647
OCEANIA				
Australia	3,457	3,528	3,680	3,800
Fiji	502	400	450	450
Papua New Guinea	25	25	30	30
SUBTOTAL	3,984	3,953	4,160	4,280
WORLD TOTAL	103,274	103,362	105,583	105,701

- 1/ Crop years are on a September/August basis, but include outturn of sugar from several Southern Hemisphere countries where harvest begins prior to September. Conversion factors used include 1.087 for refined beet sugar 1.07 for refined cane sugar.
- 2/ Preliminary.
- 3/ Forecast.
- 4/ United States data include continental beet and cane and Hawaii cane, but exclude Puerto Rico cane, which is listed separately.
- 5/ French data exclude production of cane sugar in Guadeloupe, Martinique, and Reunion, which are listed separately.
- 6/ India data include production of Khandsari sugar, a native type, semi-white centrifugal sugar. Estimated output of Khandsari sugar in thousands of tons is as follows: 1986/87 - 530; 1987/88 - 320; 1988/89 - 830; and 1989/90 - 520.

## WORLD DAIRY OUTPUT FORECAST UP IN 1989 AND 1990

World milk production was up slightly in 1988 and further increases are forecast for 1989 and 1990 as policy induced declines in the EC-12 and the United States disappear and growth continues elsewhere. World milk cow numbers for 1989 are estimated at 158 million head, down slightly because of a significant decline in the USSR. For 1990, milk cow numbers are forecast to be essentially unchanged as another decline in the USSR and further easing in the United States and the EC are offset by growth in other countries. World cow milk production in 1989 is forecast at 432 million tons, 1 percent above 1988. Output in 1990 is forecast at 438 million tons with about half the global increase due to growth in India and the United States.

Despite improved prices, U.S. milk production for 1989 is essentially unchanged from 1988. The U.S. milking herd declined again and the second summer of drought reduced forage supplies and kept concentrate prices high. Output in 1990 is forecast to increase about 2 percent as feed supplies improve and producers respond to favorable milk prices. Production control programs in Canada have essentially stabilized milk production while cow numbers continue to decline as productivity improves.

Mexico's milk production, after rising rapidly for several years, was down slightly in 1988 and early 1989. An extended summer dry period, which limited forage supplies, along with sharply increased culling caused by limited profit prospects, contributed to the decline. Increases in official milk prices under the price control system are expected to stimulate growth in milk production during late 1989 and all of 1990. Milk production in Brazil is down slightly in 1988 and 1989 as higher feed costs and poor demand prospects have tightened profit margins. Growth is forecast to resume in 1990 as monthly adjustments in official prices are helping producers keep up with inflation. Argentina's 1989 milk output is forecast to resume growth following last year's drought. Further production growth is forecast for 1990 as improvements in the domestic economy allow demand to increase. Favorable milk prices in Chile are forecast to stimulate further production increases in 1989 and 1990. After years of rapid expansion, 1989 milk production in Venezuela is down as producers attempt to adjust to sharply higher feed costs arising from the removal of foreign exchange subsidies that helped keep feed prices low.

Milk production in the EC-12, after declining 2 percent in 1988, is forecast to drop slightly in 1989 to 108 million tons. A small increase is likely in 1990. Many producers are delivering milk in quantities at or slightly above their individual quotas as over-quota production has not been a significant problem. The EC quota system called for a 6.5-percent decline in milk deliveries in 1987/88 (April-March) and a 3-percent decline in 1988/89. Current regulations do not require a further cut in 1989/90 and some producers think the quota may be increased. Within the EC, output in France declined 4 percent in 1988 and a 2-percent drop is expected in 1989. The summer months of both 1988 and 1989 were unusually dry in major dairy areas. An increase in French milk production is forecast for 1990. Production in the United Kingdom during 1989 is expected to total 14.7 million tons, 2 percent below 1988. Milk cow numbers are down only 1 percent, but a summer drought cut productivity. A small increase in output is forecast for 1990. Milk output



may recover in 1990 as milk cow numbers are forecast to stabilize. The production decline in the Netherlands has led to an increase in milk imports as Dutch processing plants strive to operate at capacity.

Milk production in Eastern Europe in 1989 is expected to be up slightly, due largely to recovery in Poland. Reports indicate that private Polish milk producers are responding to higher prices by keeping more cows. Most of the producer price improvement is due to government actions before the removal of price controls on foods in August. Thus, the full impact of market prices has yet to work its way through the system. Yugoslavia's dairy farmers were hurt in 1988 and early 1989 by high feed prices following a poor 1988 corn harvest and by declining demand due to the weak state of the general economy. In the USSR, milk output for 1989 is estimated at 107 million tons, 1 percent above 1988. A small decline is forecast for 1990 due to a short forage harvest during the summer of 1989.

Australia's 1989 milk production totaled 6.5 million tons, up 2 percent from 1988. Little change in production is expected in 1990. The 1989 increase represents recovery from the severe drought conditions that affected production in 1988. New Zealand's 1989 (June 1988-May 1989) production was down due to a wet spring and localized droughts later in the year. Production in 1990 is expected to return to the 1988 level, but limited spending on pasture fertilization and farm maintenance during the past 3 years is likely to keep production from rising above the 1988 level.

Japan's 1989 milk production is expected to total 7.8 million tons as increased productivity and declining costs have given producers an incentive to expand. However, fears of overproduction are forecast to keep 1990 output near or below the 1989 level. After several years of very rapid growth, China's milk production is expected to decline slightly in both 1989 and 1990. Rising feed costs and stable or declining milk prices have caused a cutback in cow numbers, particularly in Heilongjiang Province, the principal dairy region.

World butter production is expected to total 6.7 million tons in 1989, 1 percent above the 1988 level. Production in 1990 is forecast to remain near the 1989 level. After 3 years of sharp production declines due to reduced milk supplies, particularly supplies for manufacturing butter, EC output of butter in 1989 held near the year earlier level. Growth occurred in France and West Germany where firmer domestic prices stimulated some increase in output, but was offset by a decline in the United Kingdom where drought reduced milk production. In the United States, butter output will be up in 1989, while in New Zealand butter output is down reflecting lower milk supplies. U.S. output in 1990 is forecast to decline about 3 percent. With more milk, New Zealand's output of butter is forecast to rise 4-5 percent in 1990. Utilization of more milk for production of other dairy products allowed only a slight increase in butter production in the USSR despite an increase in milk production. With less milk production expected in 1990, output of butter is forecast to fall by 50,000 tons as production of other products continues to receive emphasis.

World cheese output for 1989 is estimated at 10.6 million tons, 1 percent above 1988. Forecasts for 1990 indicate that the global growth rate may be somewhat faster than in 1989, with the United States and the EC providing most of the increment to the global total. For 1989, U.S. cheese production is up

about 3 percent and is forecast to increase faster in 1990 as milk output increases. Output in the EC, after climbing steadily for several years, was up only 1 percent in 1989 as milk production continued to decline. New Zealand's 1989 cheese production declined, reflecting lower milk production, but an increase is forecast for 1990.

Global output of nonfat dry milk (NDM) in 1989 is up about 2 percent despite a 10-percent decline in U.S. output. EC production is forecast to increase about 5 percent due mainly to increases in France and Ireland where stronger domestic prices stimulated production. Global output in 1990 is forecast to show very little change.

Casein production at the global level is estimated at 213,000 tons in 1989, more than 10 percent below 1988. A 2-percent increase is forecast for 1990. EC production is forecast to decline nearly 20 percent in 1989 as producers react to decreased export prospects, tighter milk supplies, and better markets for NDM. Casein output in New Zealand declined from 66,000 tons to 56,000 tons in 1989, largely due to tighter milk supplies and better markets for NDM. New Zealand's casein output in 1990 is forecast to increase about 10 percent as a new plant comes online.

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Table 17

MILK COW NUMBERS IN SELECTED COUNTRIES  
(In 1,000 head)

COUNTRY/REGION	1985	1986	1987	1988 <u>1/</u>	1989 <u>2/</u>	1990 <u>2/</u>
Canada	1,618	1,547	1,481	1,467	1,449	1,440
Mexico	5,087	5,890	6,300	6,200	6,300	6,500
United States	11,016	10,813	10,329	10,239	10,110	10,040
NORTH AMERICA	17,721	18,250	18,110	17,906	17,859	17,980
Argentina	2,500	2,450	2,400	2,360	2,330	2,310
Brazil	14,500	14,500	14,700	14,700	14,650	14,750
Chile	660	670	600	630	640	650
Peru	690	695	700	703	693	698
Venezuela	1,250	1,230	1,298	1,300	1,210	1,250
SOUTH AMERICA	19,600	19,545	19,698	19,693	19,523	19,658
Belgium-Luxembourg	1,031	1,012	984	954	935	900
Denmark	896	864	811	774	760	750
France	6,764	6,506	6,359	5,841	5,820	5,830
Germany, FRANCE	5,547	5,437	5,277	5,059	4,950	4,900
Greece	355	350	350	345	343	342
Ireland	1,549	1,528	1,490	1,444	1,387	1,320
Italy	3,174	3,021	3,021	3,020	3,019	3,018
Netherlands	2,354	2,247	2,043	1,946	1,900	1,900
Portugal	374	380	388	402	414	415
Spain	1,910	1,920	1,890	1,882	1,860	1,875
United Kingdom	3,311	3,293	3,311	3,166	3,142	3,200
EC-12	27,265	26,558	25,924	24,833	24,530	24,450
Austria	995	989	976	891	860	830
Finland	628	603	580	535	502	495
Norway	381	374	357	346	343	340
Sweden	646	600	576	565	562	567
Switzerland	816	806	790	786	783	782
OTHER WEST EUROPE	3,466	3,372	3,279	3,123	3,050	3,014
Czechoslovakia	1,830	1,817	1,796	1,786	1,780	1,780
Germany, DR	2,080	2,064	2,045	2,012	2,010	2,015
Hungary	624	591	585	578	580	589
Poland	5,528	5,207	4,937	4,806	4,981	5,080
Romania	2,011	2,119	2,111	2,075	2,080	2,090
Yugoslavia	2,640	2,600	2,610	2,585	2,560	2,570
EAST EUROPE	14,713	14,398	14,084	13,842	13,991	14,124
USSR	43,600	42,900	42,400	42,000	41,300	40,500
SOUTH AFRICA	1,885	1,775	1,985	1,814	1,850	1,860
India	27,700	28,400	28,500	28,500	29,000	29,500
China (Mainland)	1,200	1,460	1,846	2,164	2,250	2,150
Japan	1,101	1,099	1,052	1,046	1,065	1,060
ASIA	30,001	30,959	31,398	31,710	32,315	32,710
Australia <u>3/</u>	1,804	1,770	1,707	1,697	1,683	1,683
New Zealand <u>4/</u>	2,165	2,221	2,252	2,282	2,236	2,228
OCEANIA	3,969	3,991	3,959	3,979	3,919	3,911
WORLD	162,220	161,748	160,837	158,900	158,337	158,207

1/ Preliminary. 2/ Forecast. 3/ Year beginning July 1. 4/ Year beginning June 1.

NOVEMBER 1989

FOREIGN PRODUCTION ESTIMATES DIVISION, IAS/FAS/USDA

Table 18

COW MILK PRODUCTION IN SELECTED COUNTRIES  
(In 1,000 metric tons)

COUNTRY/REGION	1985	1986	1987	1988 <u>1/</u>	1989 <u>2/</u>	1990 <u>2/</u>
Canada	7,891	7,925	7,986	8,229	8,250	8,260
Mexico	6,920	8,000	8,971	8,830	8,970	9,500
United States	64,930	65,037	64,663	66,010	66,050	67,450
NORTH AMERICA	79,741	80,962	81,620	83,069	83,270	85,210
Argentina	5,909	6,296	6,582	6,168	6,725	7,050
Brazil	10,700	11,600	13,300	13,200	13,200	13,800
Chile	1,040	1,130	1,133	1,154	1,290	1,350
Peru	645	652	655	668	660	664
Venezuela	1,638	1,591	1,641	1,796	1,630	1,700
SOUTH AMERICA	19,932	21,269	23,311	22,986	23,505	24,564
Belgium-Luxembourg	4,080	4,213	4,074	3,915	3,965	3,900
Denmark	5,099	5,111	4,860	4,739	4,730	4,720
France	26,830	28,074	27,146	26,000	25,500	26,000
Germany, FR	25,674	26,350	24,436	23,974	24,250	23,900
Greece	646	643	628	652	663	661
Ireland	6,047	5,816	5,751	5,607	5,530	5,635
Italy	10,227	10,278	10,300	10,671	10,700	10,720
Netherlands	12,550	12,695	11,672	11,406	11,170	11,400
Portugal	1,120	1,200	1,253	1,346	1,386	1,390
Spain	6,300	5,971	5,941	5,950	6,000	6,100
United Kingdom	16,340	16,218	15,360	14,880	14,700	15,000
EC-12	114,913	116,569	111,421	109,140	108,594	109,426
Austria	3,760	3,739	3,687	3,320	3,330	3,330
Finland	3,083	3,071	2,938	2,721	2,611	2,576
Norway	1,973	1,952	1,961	1,908	1,903	1,900
Sweden	3,695	3,533	3,477	3,445	3,489	3,533
Switzerland	3,845	3,845	3,768	3,768	3,773	3,772
OTHER WEST EUROPE	16,356	16,140	15,831	15,162	15,106	15,111
Czechoslovakia	6,883	7,015	6,921	6,880	7,000	6,900
Germany, DR	9,044	9,044	9,358	9,234	9,203	9,300
Hungary	2,723	2,732	2,770	2,788	2,834	2,897
Poland	16,585	15,747	15,467	15,450	16,000	16,320
Romania	4,320	4,239	4,275	4,300	4,350	4,400
Yugoslavia	4,679	4,661	4,736	4,629	4,550	4,600
EAST EUROPE	44,234	43,438	43,527	43,281	43,937	44,417
USSR	98,608	102,173	103,400	106,400	106,800	106,500
SOUTH AFRICA	2,327	2,200	2,410	2,450	2,495	2,510
India	19,000	19,500	21,200	22,000	23,000	24,500
China (Mainland)	2,499	2,860	3,301	3,660	3,550	3,500
Japan	7,378	7,457	7,335	7,607	7,750	7,740
ASIA	28,877	29,817	31,836	33,267	34,300	35,740
Australia <u>3/</u>	6,265	6,205	6,367	6,297	6,462	6,475
New Zealand <u>4/</u>	7,876	8,226	7,245	7,936	7,482	7,938
OCEANIA	14,141	14,431	13,612	14,233	13,944	14,413
WORLD	419,129	426,999	426,968	429,988	431,951	437,891

1/ Preliminary. 2/ Forecast. 3/ Year beginning July 1. 4/ Year beginning June 1.

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FOREIGN PRODUCTION ESTIMATES DIVISION, IAS/FAS/USDA



Table 19

BUTTER PRODUCTION IN SELECTED COUNTRIES  
(In 1,000 metric tons)

COUNTRY/REGION	1985	1986	1987	1988 1/	1989 2/	1990 2/
Canada	108	109	95	105	106	106
Mexico	18	21	26	32	33	33
United States	566	545	501	547	570	550
NORTH AMERICA	692	675	622	684	709	689
Argentina	32	32	34	35	37	39
Brazil	70	65	65	65	60	65
Venezuela	6	5	5	4	2	3
SOUTH AMERICA	108	102	104	104	99	107
Belgium-Luxembourg	105	108	94	81	90	85
Denmark	110	112	96	94	93	91
France	595	633	569	521	530	530
Germany, FR	515	567	464	390	400	390
Greece	5	6	5	5	6	6
Ireland	163	160	150	135	132	124
Italy	70	70	70	71	67	65
Netherlands	306	377	234	214	205	221
Portugal	7	9	8	10	11	11
Spain	15	29	29	23	26	27
United Kingdom	202	222	174	139	120	130
EC-12	2,093	2,293	1,893	1,683	1,680	1,680
Austria	43	46	41	42	42	41
Finland	73	72	68	61	59	58
Norway	25	25	25	23	22	21
Sweden	74	66	64	61	68	70
Switzerland	38	37	34	36	37	34
OTHER WEST EUROPE	253	246	232	223	228	224
Czechoslovakia	150	156	149	147	150	148
Germany, DR	316	320	322	310	306	315
Hungary	31	33	33	35	34	34
Poland	308	289	290	293	290	290
Romania	47	52	42	40	41	43
Yugoslavia	10	9	8	8	9	9
EAST EUROPE	862	859	844	833	830	839
USSR	1,596	1,700	1,742	1,794	1,800	1,750
SOUTH AFRICA	17	15	11	15	16	17
India	700	720	750	850	890	930
Japan	89	88	69	68	85	85
ASIA	789	808	819	918	975	1,015
Australia 3/	114	105	104	94	92	94
New Zealand 4/	293	299	248	276	248	260
OCEANIA	407	404	352	370	340	354
WORLD	6,817	7,102	6,619	6,624	6,677	6,675

1/ Preliminary. 2/ Forecast. 3/ Year beginning July 1. 4/ Year beginning June 1.



Table 20

CHEESE PRODUCTION IN SELECTED COUNTRIES  
(In 1,000 metric tons)

COUNTRY/REGION	1985	1986	1987	1988 1/	1989 2/	1990 2/
Canada	213	226	246	252	260	270
Mexico	187	262	298	370	373	391
United States	2,305	2,363	2,424	2,527	2,590	2,740
NORTH AMERICA	2,705	2,851	2,968	3,149	3,223	3,401
Argentina	210	256	277	265	281	296
Brazil	205	185	195	200	205	210
Venezuela	73	83	82	96	55	70
SOUTH AMERICA	488	524	554	561	541	576
Belgium-Luxembourg	31	33	35	37	39	41
Denmark	253	252	271	258	262	270
France	1,300	1,320	1,342	1,378	1,440	1,470
Germany, FR	495	530	553	585	600	605
Greece	193	203	197	203	205	207
Ireland	78	63	65	78	74	78
Italy	684	694	704	737	700	700
Netherlands	522	534	552	559	560	563
Portugal	46	46	47	44	45	45
Spain	101	110	113	120	125	130
United Kingdom	260	256	263	299	295	305
EC-12	3,963	4,041	4,142	4,298	4,345	4,414
Austria	83	78	78	84	84	85
Finland	79	77	78	75	75	75
Norway	72	72	75	74	76	76
Sweden	109	106	107	115	109	111
Switzerland	126	131	128	134	135	133
OTHER WEST EUROPE	469	464	466	482	479	480
Czechoslovakia	131	134	142	140	140	140
Germany, DR	246	253	264	264	273	280
Hungary	51	50	52	54	55	55
Poland	118	114	123	133	135	145
Romania	87	84	86	84	86	87
Yugoslavia	52	45	48	54	54	55
EAST EUROPE	685	680	715	729	743	762
USSR	809	844	861	890	920	920
SOUTH AFRICA	34	39	44	43	46	46
JAPAN	20	24	25	26	27	27
Australia 3/	160	170	177	176	185	190
New Zealand 4/	118	127	113	128	124	130
OCEANIA	278	297	290	304	309	320
WORLD	9,451	9,764	10,065	10,482	10,633	10,946

1/ Preliminary. 2/ Forecast 3/ Year beginning July 1. 4/ Year beginning June 1.



Table 21

NONFAT DRY MILK PRODUCTION IN SELECTED COUNTRIES  
(In 1,000 metric tons)

<u>COUNTRY/REGION</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u> <u>1/</u>	<u>1989</u> <u>2/</u>	<u>1990</u> <u>2/</u>
Canada	102	109	110	110	105	105
Mexico	3	3	4	5	6	7
United States	630	582	480	444	400	400
NORTH AMERICA	735	694	594	559	511	512
Argentina	17	12	13	22	29	31
Brazil	40	30	30	40	40	45
Chile	3	4	4	4	4	4
Venezuela	9	8	12	4	3	4
SOUTH AMERICA	69	54	59	70	76	84
Belgium-Luxembourg	128	138	99	83	100	95
Denmark	25	31	18	7	11	10
France	650	712	603	490	520	540
Germany, FR	552	647	474	408	420	400
Ireland	161	156	129	102	136	120
Italy	2	2	0	1	0	0
Netherlands	153	172	98	87	84	95
Portugal	5	6	8	9	10	11
Spain	18	34	39	29	25	26
United Kingdom	252	267	193	136	120	130
EC-12	1,946	2,165	1,661	1,352	1,426	1,427
Austria	31	33	28	23	22	21
Finland	42	44	39	28	30	34
Sweden	58	48	46	36	46	48
Switzerland	35	30	30	32	33	30
OTHER WEST EUROPE	166	155	143	119	131	133
Germany, DR	50	50	52	48	48	50
Poland	158	161	156	159	165	170
Yugoslavia	8	8	6	7	8	9
EAST EUROPE	216	219	214	214	221	229
USSR	260	280	310	350	380	380
SOUTH AFRICA	25	17	12	19	20	19
India	61	79	54	80	90	95
Japan	181	184	153	159	160	160
ASIA	242	263	207	239	250	255
Australia <u>3/</u>	148	124	128	120	118	120
New Zealand <u>4/</u>	242	215	173	198	181	180
OCEANA	390	339	301	318	299	300
WORLD	4,049	4,186	3,501	3,240	3,314	3,339

1/ Preliminary. 2/ Forecast. 3/ Year beginning July 1. 4/ Year beginning June 1.

NOVEMBER 1989

FOREIGN PRODUCTION ESTIMATES DIVISION, IAS/FAS/USDA



# UNITED STATES DEPARTMENT OF AGRICULTURE

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Table 22

## CASEIN PRODUCTION IN SELECTED COUNTRIES (In 1,000 metric tons)

COUNTRY/REGION	1985	1986	1987	1988 <u>1/</u>	1989 <u>2/</u>	1990 <u>2/</u>
France	49	44	52	61	50	50
Germany, FR	20	20	25	25	23	23
Ireland	31	31	39	41	33	30
Italy	0	1	0	0	0	0
Netherlands	20	20	20	20	15	15
United Kingdom	4	2	1	0	1	1
EC-12	124	118	137	147	122	119
POLAND	33	25	22	24	28	30
Australia <u>3/</u>	8	7	8	9	7	7
New Zealand <u>4/</u>	64	75	62	66	56	62
OCEANIA	72	82	70	75	63	69
WORLD	229	225	229	246	213	218

1/ Preliminary. 2/ Forecast. 3/ Year beginning July 1. 4/ Year beginning July 1.